



# Standards Gap Analysis for Cooperative Intelligent Transportation Systems

## Results: Resolution Perspective

Document HTG7-3-2

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Standards Harmonisation Working Group

Harmonisation Task Group 7



## Standards Gap Analysis for Cooperative ITS

### HTG7-3-2 Results: Resolution Perspective

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## 1. Introduction

### 1.1 Background

Advancements in transportation technologies are rapidly transforming the world's strategies for increasing safety; gaining operational, mobility, and cost efficiencies; opening access to underserved communities; and reducing environmental impacts from transportation. Using new forms of short-range communications, vehicles and devices are now capable of broadcasting or receiving data that allow them to sense the movements and status of other surrounding devices. These cooperative exchanges create a three hundred sixty degree awareness that, when further fused with other open data, can enable drivers and other users of the transportation system to receive alerts and warnings regarding the formation of threats and hazards. The alerts and warnings created through these communication technologies provide the opportunity to prevent some crashes, thereby reducing fatalities, injuries, and property damage. The cooperative exchange of data in this manner can also enhance the benefits of automation.

Access to new data sets can also transform network operations and minimize the capital investment costs of infrastructure owners and operators. Broadcast data sets from users within a highly mobile environment can complement or potentially supersede the need for significant roadside equipment on major roads. These new data can also form a more complete representation of conditions on the arterial network, including road weather impacts, effects of traffic signal timing, support for incident and emergency responders, or changes in traveller decisions, among other conditions.

Standards for interfaces in the public interest can play a key role in delivering these benefits to communities that implement cooperative-ITS technologies. Technical standards are developed to address coordination problems and overcome technical barriers that exist when different organizations need to work together while preserving their institutional and proprietary processes. The International Organization for Standards (ISO) defines a standard as, "... a document, established by a consensus of subject matter experts and approved by a recognized body that provides guidance on the design, use or performance of materials, products, processes, services, systems or persons." The end documents, which frequently represent the interests of the experts and parties that gather to develop them, are vetted by experts. Recognized benefits include improved safety, mobility, and sustainability for the travelling public and enhanced interoperability within an open market environment.<sup>1</sup>

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<sup>1</sup> See definitions at: the European Committee for Standardization (CEN): <https://www.cen.eu/work/ENdev/whatisEN/Pages/default.aspx>; the International Organization for Standards (ISO): [https://www.iso.org/sites/ConsumersStandards/1\\_standards.html](https://www.iso.org/sites/ConsumersStandards/1_standards.html); Wikipedia: [https://en.wikipedia.org/wiki/Technical\\_standard](https://en.wikipedia.org/wiki/Technical_standard); the National Institute of Standards and Technology (NIST): <https://www.nist.gov/services-resources/standards-and-measurements>.

## 1.2 History

In 2011, the United States (US) Department of Transportation (USDOT) and the European Commission (EC) approved a [Harmonisation Action Plan](#) to guide EC-US standards development via Harmonisation Task Groups (HTGs). The plan recognises that successful, interoperable, nationwide or regional, cooperative technology implementations are critically dependent upon consistent application of complete, technically sound standards and policies for critical functions, interfaces, and **information flows**<sup>2</sup>. This worldwide need applies to the common services of a cooperative systems environment as well as to global markets for vehicles, devices, and applications. While the envisioned end state appears very similar in many parts of the world, past analyses have been regional and independent in nature and have proceeded with varying levels of coordination. The HTGs allow participating countries to collaborate on technical ITS issues that are of common interest and thus leverage critical expertise and resources while potentially realizing more compatible worldwide solutions.

Transport Certification Australia (TCA) joined the HTG initiatives in January 2014 by bringing security expertise and co-leadership to the sixth HTG (HTG6).<sup>3</sup>

## 1.3 HTG7

With the emergence in 2015 of plans in the US, Europe, and Australia to develop pilot **Cooperative Intelligent Transportation Systems (C-ITS)**<sup>4</sup> projects, a new HTG was established to identify how existing standards could support new C-ITS installations (i.e., “standards solutions for C-ITS”) and, in doing so, identify the issues in standards that could pose risks for deployers. This seventh HTG (HTG7) began in late 2015 as a joint effort between the EC, the USDOT, and TCA, with the Japan Ministry of Land, Infrastructure, Transport and Tourism (MLIT) joining in 2017.

Specifically, the objective of HTG7 was to identify standards that comprehensively support large-scale C-ITS deployments. HTG7 expects that fulfilling this objective will allow:

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<sup>2</sup> Terms that are in ***bold italics*** in this report are defined in a companion report, the **HARTS Reference Compendium (HTG7-5)**, which defines all of the terms used throughout this report set. Terms defined in the reference compendium are bold faced and italicised within each HARTS report upon their first use.

<sup>3</sup> Results of HTG6 are located here: <https://ec.europa.eu/digital-single-market/news/harmonized-security-policies-cooperative-intelligent-transport-systems-create-international>.

<sup>4</sup> C-ITS is a subset of ITS that requires the mutual, secure exchange of data between *independent* trusted entities (i.e., parties that have no contractual relationship). In other words, while traditional ITS typically deals with exchanges among system components owned and managed by a single or limited number of entities; these new ITS services expand this scope to include system components (e.g., vehicles) that may be owned and managed by any number of different entities. The scope of the HTG7 analysis included the C-ITS interfaces (i.e., exchanges between parties with no contractual relationship but with security and authentication as the basis for trust) as well as the more traditional “back-office” flows (between contracted parties) that enable the provision of the C-ITS services. This architecture presents a level of connectivity suggesting an “Internet of Things” for transportation.

1. **Governments, standards organisations, and other interested stakeholders** to track **issues** regarding those interfaces and information flows that are of significant public interest within the C-ITS **architecture**, facilitating engagement with experts to address them;
2. **ITS deployment teams, device manufacturers, and application developers** to identify candidate standards-based **solutions** that are available to them for planning, understand the issues associated with those solutions, and mitigate the risks associated with those issues in their deployments. Future ITS deployment teams around the world will have a clearer understanding about which system functions and interfaces are critical for **interoperability** and where standards are defined (or not yet defined) to support interoperability.

### 1.4 Globally Harmonised Reference Architecture

To establish a foundation for analysing standards, the international HTG7 team first developed the **Harmonised Architecture Reference for Technical Standards (HARTS)**. HARTS facilitates the understanding of the applicability of standards (ITS standards and other Information and Communications Technology (ICT) standards) for the successful implementation of **C-ITS services**<sup>5</sup>. HARTS provided the framework for the HTG7 team to identify key interfaces that need to be standardised in the public interest and served as the basis for performing the **gap** and **overlap** analysis of C-ITS standards for those interfaces.

HARTS is an internationally harmonised reference architecture based on:

- National ITS Architecture Framework (NIAF) from Australia
- EU's Framework Architecture (FRAME) from Europe
- Connected Vehicle Reference Implementation Architecture (CVRIA) from the US
- C-ITS architecture constructs from Japan

The body of work produced by HTG7 includes key resources for industry, such as HARTS and the accompanying HTG7 reports. These tools not only provide a starting point for the ITS community to address the technical and interoperability challenges that face wide-scale ITS deployment; but also provide tactical guidance on standards, solutions, and risks for current or near-term project teams planning and implementing ITS systems. Although the reports are based on a globally harmonised **reference architecture**, they formally recognise and accommodate regional and local approaches to ITS services, solutions, and standards.

### 1.5 Format of HTG7 Reports

The results summarized in this Executive Summary are presented in greater detail in the HTG7 series of reports:

- **Executive Overview ([HTG7-1](#))** - A high-level summary of the approach, process and the key results of HTG7.

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<sup>5</sup> For the purpose of this report, the term "C-ITS service" is intended to include all ITS services encompassed by the HARTS service packages; at the time of publication 34 are available on the HARTS website (<http://htg7.org>).

- **Analysis Methodology ([HTG7-2](#))** - Presents the HTG7 methodology used to develop HARTS, perform the gap analysis, and develop proposed resolutions.
- **Issues and Proposed Resolutions ([HTG7-3](#), this document)** - Summarises the issues identified through HTG7 analysis and proposes actions to resolve the issues. It introduces a series of more detailed reports, detailed below, each of which identifies the same set of proposed resolutions but adopts a presentation format and includes details relevant to a different perspective.
  - **Results: Solution Perspective for Deployers ([HTG7-3-1-AU](#), [HTG7-3-1-EU](#), [HTG7-3-1-JP](#), [HTG7-3-1-US](#))** - Addresses development or implementation teams in their planning and procurement processes. This detailed report lists each solution along with its associated issues and proposed resolutions and is divided into four regional sub-reports, one for each participating region. (The region is reflected by the appended 2-letter region code<sup>6</sup>).
  - **Results: Resolution Perspective for Standards Developers ([HTG7-3-2](#))** - Presents each proposed resolution along with its associated issues and the data exchanges affected by these issues. This detailed report can assist standards development communities and governments in their planning and work processes.
  - **Results: Service Package Perspective ([HTG7-3-3-AU](#), [HTG7-3-3-EU](#), [HTG7-3-3-JP](#), [HTG7-3-3-US](#))** - Offers road operators the opportunity to evaluate the “readiness” of **service packages**. This detailed report lists each service package, the data exchanges contained within the service package, and the issues associated with each solution for each data exchange. In this respect, this report helps deployers understand the levels of risk due to the standards gaps. The report is divided into 4 regional reports, one for each participating region. (The region is reflected by the appended the 2-letter region code<sup>6</sup>).
- **HARTS Website Overview ([HTG7-4](#))** - Provides an overview of the HARTS public website, available at <http://htg7.org>. It describes each aspect of the website and provides instructions on how to submit comments about the information on the website.
- **HARTS Reference Compendium ([HTG7-5](#))** - Provides reference material including:
  - A glossary of terms and associated definitions
  - Acronyms and associated meanings
  - Graphic symbols and associated meanings
  - Explanations of key terms and their inter-relationships

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<sup>6</sup> As defined by ISO 3166-1:2013 *Codes for the representation of names of countries and their subdivisions – Part 1: Country codes*



## 1.6 Conventions

While the HTG7 Report set was developed using United Kingdom (UK) English, the HARTS (toolset and website) was developed using US English. Whenever an extract from HARTS is presented within the HTG7 Report set, it will retain its US English spelling.

As noted in footnote 2 on page 2, this report is supplemented by the HARTS Reference Compendium (HTG7-5), which defines all of the terms used throughout this report set. Terms defined in the reference compendium are bold faced and italicised within each HARTS report upon their first use.

## 1.7 Purpose of this Document

This document, **HTG7-3-2 Results: Resolution Perspective**, is one of nine detailed reports designed to report the issues found and their proposed resolutions, each from a unique perspective. They are adjuncts to the Summary of Issues and Proposed Resolutions (HTG7-3) report, which summarises the results of the HTG7 analysis, summarises the key issues identified during the analysis, and provides a comprehensive set of proposed and prioritised resolutions. The nine detailed reports offer three different technical perspectives, with two of those perspectives further broken out into the four regions encompassed by the HTG7 analysis. The specific detailed reports are as follows:

- **Solution Perspective:** Assists implementation teams in understanding the issues surrounding each solution contained within the HARTS analysis; there is one detailed report for each of the four regions covered by the HARTS analysis. The name of each of the four reports will have a two-letter identifier (-AU, -EU, -JP or -US) at the end of the report identifier and the electronic filename.
- **Resolution Perspective:** Provides an overarching view of the work that still needs to be completed to provide a fully interoperable C-ITS environment and is intended primarily for standards development organisations and governmental entities.
- **Service Package Perspective:** For entities that are deploying C-ITS, such as governmental agencies, product vendors and others that are interesting in the complete end-to-end implementation of an ITS service package; there is one detailed report for each of the four regions covered by the HARTS analysis. The identifier of each of the four reports will have a two-letter identifier (-AU, -EU, -JP or -US) at the end of the report title and the electronic filename.

Please note that each of these detailed reports is extremely large and therefore not intended for printing.



## 2. Report Perspective

In accordance with guidance in ISO 42010-2011, “*Systems and software engineering — Architecture description*”, this detailed report is designed to address a specific set of concerns, or perspective, of a specific group of stakeholders. This detailed report provides the resolution perspective. It provides a table of the HARTS analysis results structured to provide insight for the standards development community, or other decision makers, who wish to develop roadmaps and work plans for standards development activity. This detailed report is intended to aid in the prioritisation of work activities and facilitate the cohesive and cooperative planning for standards development activities.

The results in this detailed report are therefore organised by proposed resolution, accompanied by a list of the issues that should be addressed by the resolution. Under each issue addressed by the resolution, the detailed report then lists the various **information triples** (**source**, **destination** and information flow) and paired solution that trace to the issue and proposed resolution. This is summarised in Figure 1.

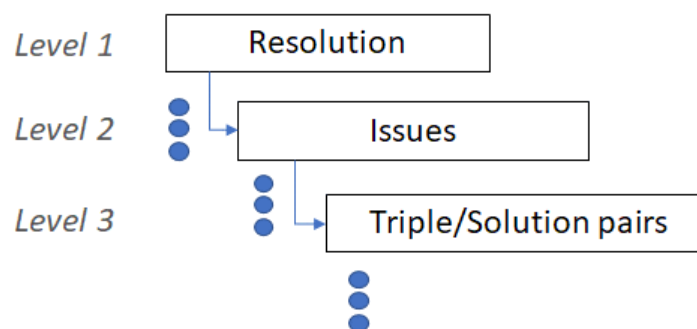


Figure 1: Resolution Perspective Overview

### 3. Report Structure

As show in Figure 1 above, there are multiple levels within the detailed report. Each level will consist of one, or possibly two header rows, followed by one or more content rows. Given the multi-level detailed report structure, higher-level sorting fields are typically displayed in header rows (e.g., at the start of the detailed report and when values change) while the lowest-level sorting fields may only appear in content rows. When the header field value is changed, the page header for each subsequent page is changed accordingly. Figure 2 below illustrates the detailed report structure, and each field included in the detailed report is subsequently defined in Table 1.

Level 1	Class	Timeframe	Proposed Resolution	Description	Regional Applicability		
	Security	Urgent	Text	Text	US		
Level 2	Issue Description	Text				Severity	Ultra
Level 3	Relevant Flow Solution Combinations						
	Source	Destination	Flow	<u>SolutionName</u>	Notes		
	Source 17	Destination 43	Flow 28	Solution 324	text		
	Source 17	Destination 87	Flow 123	Solution 945	text		
	Source 18	Destination 56	Flow 65	Solution 117	text		

Figure 2: Resolution Perspective Report Structure

The following table contains the field name, its description and its value range for each of the detailed report fields in Chapter 4. They are listed in the table below according to the order in which they appear in the detailed report in Chapter 4. Additionally, the table also shows the sorting criteria used for the detailed report, including the order of sorting fields, the sorting method used, and the sort direction.

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Table 1: Resolution Perspective Report Field Descriptions

Report	Field Information			Sort Criteria		
Level	Title	Description	Value Range	Order	Measure	Direction
1	<b>Class</b>	The class of proposed resolutions to which the specific resolution belongs. Each of the 112 defined proposed resolutions is aligned to a class.	Ordered List found in HTG7-5.	2	List Order	↓
	<b>Timeframe</b>	The timeframe in which the proposed resolution needs to be addressed in order to eliminate or mitigate the associated issues(s) which will facilitate wide-scale deployments of impacted solutions, triples, and service packages.	Ordered List (Urgent, Near-Term, Medium-Term, Future)	1	List Order	↓
	<b>Proposed Resolution</b>	The name of the proposed resolution, which will correspond to one of the 112 defined proposed resolutions.	ASCII <sup>7</sup> text	3	Alphabetic	↓
	<b>Description</b>	A description of the proposed resolution.	ASCII text	–	–	–
	<b>Regional Applicability</b>	The HARTS region or regions in which the proposed resolution is relevant.	Multiple from the following list (AU, EU, JP, US)	–	–	–
2	<b>Issue Description</b>	A summary description of the issue.	ASCII	–	–	–

<sup>7</sup> ASCII (American Standard Code for Information Exchange)

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Report	Field Information			Sort Criteria		
Level	Title	Description	Value Range	Order	Measure	Direction
	<b>Severity</b>	An indication of how severe the issue is deemed to be. If the severity of the issue needs to be decided when assigning the issue, multiple issues can be created with slightly different names and definitions. For example, "Data may not be fully defined (low)" and "Data not fully defined (medium)".	Ordered List (Ultra, High, Medium, Low)	4	List Order	↓
3	<b>Source</b>	The HARTS <i>subsystem</i> that is the source of the information in the flow. The combination of the source, destination and the information flow constitute the information triple.	ASCII	5	Alphabetic	↓
	<b>Destination</b>	The HARTS subsystem that is the destination of the information in the flow. The combination of the source, destination and the information flow constitute the information triple.	ASCII	6	Alphabetic	↓
	<b>Flow</b>	Summary name for the information that is exchanged between subsystems in the Physical View of HARTS. These Information flows and their communication requirements define the interfaces which formed the basis for the standards analysis conducted by HTG7. The combination of the source, destination and the information flow constitute the information triple.	ASCII	7	Alphabetic	↓


## Standards Gap Analysis for Cooperative ITS HTG7-3-2 Results: Resolution Perspective

Report	Field Information			Sort Criteria		
Level	Title	Description	Value Range	Order	Measure	Direction
	<b>SolutionName</b>	The name of the solution expressed as a hyphenated concatenation of the HARTS <b>data profile</b> and the HARTS <b>communication profile</b> that collectively define the solution.	ASCII	8	Alphabetic	↓
	<b>Notes</b>	Notes relevant to this specific instance of the issue	ASCII	–	–	–

## 4. Report Content

The table of results is shown below.

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HTG7-3-2: Resolution Perspective

Wednesday, December 19, 2018

12:43:37 PM

Class	Foundational	Timeframe	Urgent	Proposed Resolution	C-V: Wide-area broadcast subnet and hybrid communications	Regional Applicability	Australia, European Union, United States
Class	Timeframe	Proposed Resolution	Description			Regional Applicability	
Foundational	Urgent	C-V: Wide-area broadcast subnet and hybrid communications	Standardise one or more mechanisms by which wide-area broadcast messages can be received by a defined minimum percentage of transportation users that are currently operating within a specified geographic area. The required minimum percentage is dependent on the type of information being transmitted and will need to be determined by the expert community. Some alerts (e.g., tornado warnings) will require near 100% reception, while other messages (e.g., road works ahead) may require significantly lower minimum percentages. The minimum percentage may be made up with a variety of technologies using hybrid communications and the ITS station architecture.			Australia, European Union, United States	
Issue Description:		With the continual enhancement of broadcast technologies and a mixture of free and subscriber-based systems, it is difficult to identify any single technology that can be used to reliably reach the bulk of drivers in a timely manner.				Severity	Low
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Transportation Information Center	Personal Information Device	emergency traveler information	(None-Data) - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Transportation Information Center	Vehicle OBE	emergency traveler information	(None-Data) - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Personal Information Device	traffic-related regulations	(None-Data) - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Vehicle OBE	traffic-related regulations	(None-Data) - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Transportation Information Center	Personal Information Device	broadcast traveler information	TMC - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Transportation Information Center	Vehicle OBE	broadcast traveler information	TMC - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Personal Information Device	wide area broadcast traveler information	TMC - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	TMC - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Vehicle OBE	wide area broadcast traveler information	TMC - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Transportation Information Center	Personal Information Device	broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Transportation Information Center	Vehicle OBE	broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Personal Information Device	wide area broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Vehicle OBE	wide area broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Transportation Information Center	Personal Information Device	broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Transportation Information Center	Vehicle OBE	broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Personal Information Device	wide area broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			
Wide Area Information Disseminator	Vehicle OBE	wide area broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)	Ensuring that the public receives the transmission is difficult without a ubiquitous broadcast technology			



Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Foundational	Urgent	Data distribution technologies	Investigate emerging ICT technologies that might offer mechanisms to distribute data among multiple ITS subsystems on an as-needed basis in a more efficient, secure, and scalable manner than existing approaches. Determine where the use of these technologies might be appropriate, and what impacts the adoption of such technologies would have on ITS standards efforts.				Australia, European Union, United States	
Issue Description:	The proposed solution uses a suite of standards that is accepted within some communities, but has not necessarily been accepted for use within the context of this information triple.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	vehicle signage local data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	work zone warning notification	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.				
ITS Roadway Equipment	Emissions Management Center	vehicle emissions data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.				
Other Data Distribution Systems	Data Distribution System	field situation data sharing	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Other Data Distribution Systems	Data Distribution System	traveler situation data sharing	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Other Data Distribution Systems	Data Distribution System	vehicle situation data sharing	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Other Emergency Management Centers	Emergency Management Center	evacuation coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Other Freight Distribution and Logistics Centers	Freight Distribution and Logistics Center	load matching systems coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Other Map Update Systems	Map Update System	map update coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Parking Management System	Map Update System	parking facility geometry	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Parking Management System	Transportation Information Center	parking reservation confirmation	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Payment Administration Center	Parking Management System	vehicle payment request	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Privacy Protection Gateway	Center	protected location and address flow	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Security Credentials Registry	Commercial Vehicle Check Equipment	security credentials	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Service Monitor System	Center	service maintenance status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Service Monitor System	Data Distribution System	service maintenance status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Storage Facility Data Acquisition System	Maint and Constr Management Center	maintenance materials storage status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Traffic Management Center	Emissions Management Center	low emissions zone coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Traffic Management Center	Intermodal Terminal	intermodal freight traffic confirmation	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Traffic Management Center	Map Update System	map update notification	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Commercial Vehicle Check Equipment	Commercial Vehicle OBE Service Provider	security credentials	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Commercial Vehicle Check Equipment	Emergency Management Center	commercial vehicle incident notification	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Commercial Vehicle Check Equipment	Enforcement Center	violation notification	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Commercial Vehicle OBE Service Provider	Commercial Vehicle Administration Center	commercial vehicle permit information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Connected Vehicle Roadside Equipment	Parking Management System	connected vehicle parking data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
CVO Information Requestor Center	Commercial Vehicle Administration Center	request for data review	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Data Distribution System	Other Data Distribution Systems	field situation data sharing	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Data Distribution System	Other Data Distribution Systems	traveler situation data sharing	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Data Distribution System	Other Data Distribution Systems	vehicle situation data sharing	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				
Data Distribution System	Service Monitor System	service maintenance request	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.				

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Emissions Management Center	Connected Vehicle Roadside Equipment		vehicle emissions monitoring parameters		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	ITS Roadway Equipment		emissions sensor control		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE application install/upgrade		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE configuration settings		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE control commands		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Field Support Equipment	ITS Roadway Equipment		field equipment software install/upgrade		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Center		device identification		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		infrastructure restriction warning		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		reduced speed warning info		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		traffic gap information		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		vehicle entries and exits		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Parking Management System	Payment Administration Center		service payment information		(Out of Scope) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Emergency Management Center		road network conditions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Emergency Management Center		road weather advisories		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Emissions Management Center		corridor operational strategies		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center		incident information		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center		road network conditions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center		road weather advisories		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Archived Data Center	Archived Data User Systems		archive analysis results		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Archived Data Center	Archived Data User Systems		archive request confirmation		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Archived Data Center	Archived Data User Systems		archived data products		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Archived Data Center	Center		archive requests		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Archived Data Center	Center		archive status		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Archived Data Center	Government Reporting Systems		government reporting system data		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Archived Data User Systems	Archived Data Center		archive analysis requests		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Archived Data User Systems	Archived Data Center		archived data product requests		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection Administration Center	Border Inspection System		consolidated agency response		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection Administration Center	Border Inspection System		manifest data		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection Administration Center	Border Inspection System		traveler personal information		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection Administration Center	Fleet and Freight Management Center		clearance notification		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection Administration Center	Freight Distribution and Logistics Center		clearance notification		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection Administration Center	Intermodal Customer System		clearance notification		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection System	Border Inspection Administration Center		border security input		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection System	Border Inspection Administration Center		inspection results		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection System	Commercial Vehicle Administration Center		arrival notification		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Cellular Communications Provider	Transportation Information Center		comm-derived travel time data		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Map Update System		map update notification		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Service Monitor System		service maintenance request		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Center	Service Monitor System		system monitoring		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Border Inspection Administration Center	border clearance status		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	border agency clearance results		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	carrier participation report		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	commercial vehicle permit information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	credentials information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	credentials status information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	cv driver record		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	safety status information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	targeted list		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle Check Equipment	transportation border clearance assessment		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Commercial Vehicle OBE Service Provider	commercial vehicle permit information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	CVO Information Requestor Center	carrier participation report		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	CVO Information Requestor Center	credentials information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	CVO Information Requestor Center	credentials status information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	CVO Information Requestor Center	cv driver record		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	CVO Information Requestor Center	safety status information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	border clearance status		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	citation		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	compliance review report		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	credentials information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	credentials status information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	cv driver record		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	safety status information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	trigger area		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center	trigger area notification		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Intermodal Customer System	border clearance status		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers	accident report		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers	citation		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers	commercial vehicle permit information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers	credential fee coordination		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers	credentials information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers	credentials status information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers	cv driver record		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers	safety status information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Transportation Information Center	commercial vehicle permit information		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Check Equipment	Commercial Vehicle Administration Center	border clearance event		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Check Equipment	Commercial Vehicle Administration Center	citation		(None-Data) - OMG DDS		DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Commercial Vehicle Check Equipment	Commercial Vehicle Administration Center			daily site activity data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Check Equipment	Commercial Vehicle Administration Center			on-board safety data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Check Equipment	Commercial Vehicle Administration Center			violation notification	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Service Monitor System			support system status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Other Emergency Management Centers			evacuation coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Public Health System			public health request	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center			special vehicle restricted use information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transportation Information Center			transportation system status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	Traffic Management Center			low emissions zone coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	Traffic Management Center			low emissions zone operations information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	Traffic Management Center			mobile source emissions data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	Traffic Management Center			widearea statistical pollution information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	Transit Management Center			low emissions zone coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	Transit Management Center			low emissions zone operations information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	Transportation Information Center			low emissions zone operations information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Enforcement Center	Commercial Vehicle Check Equipment			information on violators	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Event Promoters	Parking Management System			event plans	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Border Inspection Administration Center			manifest data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center			audit data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center			credential application	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center			on-board safety data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center			request for permit	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center			tax filing	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center			unique identifiers	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Emergency Management Center			commercial vehicle incident notification	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Freight Distribution and Logistics Center			available truck capacity	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Freight Distribution and Logistics Center			load appointment status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Intermodal Customer System			available truck capacity	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Intermodal Customer System			booking status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Intermodal Terminal			container delivery request	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Intermodal Terminal			container pickup confirmation	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Intermodal Terminal			terminal reservation request	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Transportation Information Center			commercial vehicle trip information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Transportation Information Center			freight traveler information preferences	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Border Inspection Administration Center			manifest data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Fleet and Freight Management Center			available loads	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Fleet and Freight Management Center			load matching info	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Intermodal Customer System			booking status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	



Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Freight Distribution and Logistics Center	Intermodal Terminal			container availability request	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Other Freight Distribution and Logistics Centers			load matching systems coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Transportation Information Center			freight traveler information preferences	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Government Reporting Systems	Archived Data Center			government reporting data receipt	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Customer System	Border Inspection Administration Center			manifest data	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Customer System	Fleet and Freight Management Center			available loads	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Customer System	Freight Distribution and Logistics Center			available loads	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Customer System	Transportation Information Center			freight traveler information preferences	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Fleet and Freight Management Center			container pickup request	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Fleet and Freight Management Center			intermodal terminal status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Fleet and Freight Management Center			terminal reservation	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Freight Distribution and Logistics Center			container availability status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Freight Distribution and Logistics Center			intermodal terminal status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Traffic Management Center			intermodal freight event information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Transportation Information Center			intermodal terminal status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Emergency Management Center			road network status assessment	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Emergency Management Center			roadway maintenance status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Maintenance and Construction Administrative Systems			maint and constr work performance	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Traffic Management Center			special vehicle restricted use information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center			roadway maintenance status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maintenance and Construction Administrative Systems	Maint and Constr Management Center			maint and constr administrative information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Map Update System	Center			map updates	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Map Update System	Other Map Update Systems			map update coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Map Update System	Parking Management System			parking facility geometry	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			accident report	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			citation	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			commercial vehicle permit information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			credential fee coordination	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			credentials information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			credentials status information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			cv driver record	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			safety status information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Parking Management System			parking demand management request	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Parking Management System			parking traffic information	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Parking Management System			transportation operational strategies	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transit Management Center			dynamic bus lane status	(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Traffic Regulatory Authority	Transportation Information Center		traffic-related regulations		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Emissions Management Center		low emissions zone coordination		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Traffic Management Center		dynamic bus lane request		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Emergency Management Center		road network environmental situation data		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center		freight-specific traveler information		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center		road network environmental situation data		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Freight Distribution and Logistics Center		freight-specific traveler information		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Intermodal Customer System		freight-specific traveler information		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Maint and Constr Management Center		road network environmental situation data		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Parking Management System		parking reservation request		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Surface Transportation Weather Service		road network environmental situation data		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Traffic Management Center		road network environmental situation data		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Travel Services Provider System	Transportation Information Center		travel service reservations		(None-Data) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Connected Vehicle Roadside Equipment		RSE application information		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Center	Connected Vehicle Roadside Equipment		RSE application install/upgrade		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Center	Connected Vehicle Roadside Equipment		RSE control commands		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Connected Vehicle Roadside Equipment		trigger area notification		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Connected Vehicle Roadside Equipment		trigger control		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Archived Data Center		local situation data		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Center		device identification		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Center		protected location and address flow		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Center		RSE application status		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Administration Center		on-board safety data		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Administration Center		roadside data message		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Data Distribution System		local situation data		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Electric Charging Station		vehicle charging profile		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Emergency Management Center		work zone safety application status		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Emissions Management Center		low emissions zone application status		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Field Support Equipment		RSE application install/upgrade		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Field Support Equipment		RSE configuration settings		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Field Support Equipment		RSE control commands		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		environmental situation data		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		intersection infringement info		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		restricted lanes application status		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		vehicle entries and exits		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		vehicle occupancy		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		work zone warning notification		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Payment Equipment		vehicle entries and exits		(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment		Maint and Constr Management Center		environmental situation data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Maint and Constr Management Center		reduced speed warning status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Maint and Constr Management Center		vehicle signage application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Maint and Constr Management Center		work zone safety application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Map Update System		vehicle location data for mapping	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Other Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Parking Management System		connected vehicle parking data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Payment Administration Center		access violation notification	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Payment Administration Center		road use history	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Payment Administration Center		toll collection application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Payment Administration Center		vehicle payment information	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		automated lane status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		environmental situation data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		infrastructure restriction warning status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		intersection management application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		intersection safety application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		lighting management application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		local border wait times	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		queue warning application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		rail crossing application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		reduced speed warning status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		restricted lanes application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		speed management application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		stop sign gap assist RSE status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic metering application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic monitoring application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		vehicle signage application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		work zone application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Transit Management Center		transit user guidance application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Transportation Information Center		electric charging station information	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Transportation Information Center		environmental situation data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Transportation Information Center		local situation data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Transportation Information Center		road weather advisory status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Transportation Information Center		traveler information application status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Data Distribution System		Connected Vehicle Roadside Equipment		local traveler information distribution data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Data Distribution System		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
DMV		ITS Roadway Equipment		registration	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	



Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Electric Charging Station		Connected Vehicle Roadside Equipment		current charging status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emergency Management Center		Connected Vehicle Roadside Equipment		emergency acknowledge	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emergency Management Center		Connected Vehicle Roadside Equipment		work zone safety application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emissions Management Center		Connected Vehicle Roadside Equipment		low emissions zone application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		infrastructure restriction warning status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		lane management information	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		lane violation notification	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		rail crossing blockage notification	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		rail crossing status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Payment Equipment		Connected Vehicle Roadside Equipment		payment instructions	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Payment Equipment		Connected Vehicle Roadside Equipment		vehicle entries and exits	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		work zone safety application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Map Update System		Connected Vehicle Roadside Equipment		map updates	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Map Update System		Connected Vehicle Roadside Equipment		parking facility geometry	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other Connected Vehicle Roadside Equipment		Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other Parking Management Systems		Parking Management System		parking coordination	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Parking Management System		Connected Vehicle Roadside Equipment		parking management application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Parking Management System		Other Parking Management Systems		parking coordination	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Payment Administration Center		Connected Vehicle Roadside Equipment		road use charges	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Payment Administration Center		Connected Vehicle Roadside Equipment		toll collection application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Payment Administration Center		Connected Vehicle Roadside Equipment		vehicle payment request	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Payment Administration Center		ITS Roadway Payment Equipment		payment instructions	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		automated lane control data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		infrastructure restriction warning info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection management application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection safety application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		lighting management application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		queue warning application information	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		rail crossing application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		restricted lanes application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Traffic Management Center		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		speed management application information	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		stop sign gap assist info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic metering application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic monitoring application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Connected Vehicle Roadside Equipment		work zone application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		infrastructure restriction warning control	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Transit Management Center		Connected Vehicle Roadside Equipment		transit user guidance application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Transportation Information Center		Connected Vehicle Roadside Equipment		electric charging services inventory	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Transportation Information Center		Connected Vehicle Roadside Equipment		road weather advisory info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Transportation Information Center		Connected Vehicle Roadside Equipment		traveler information application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Tunnel Management System		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		lighting system control data	DDS: NTCIP Lighting - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		roadway dynamic signage data	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		roadway dynamic signage status	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Other ITS Roadway Equipment		dynamic sign coordination	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other ITS Roadway Equipment		ITS Roadway Equipment		dynamic sign coordination	DDS: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emergency Management Center		Traffic Management Center		emergency traffic control request	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center		Traffic Management Center		incident information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center		Transportation Information Center		incident information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center		Transportation Information Center		air quality information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center		Commercial Vehicle Administration Center		route restrictions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		Center		equipment maintenance status	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		Commercial Vehicle Administration Center		current infrastructure restrictions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		Emergency Management Center		road weather information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		Map Update System		current infrastructure restrictions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		Surface Transportation Weather Service		road weather information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Maint and Constr Management Center	Traffic Management Center		current infrastructure restrictions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Payment Equipment		payment transactions		(Out of Scope) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Payment Administration Center		service payment information		(Out of Scope) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Payment Equipment	Payment Administration Center		payment transactions		(Out of Scope) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Transportation Information Center		route request		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		multimodal information		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		parking information		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Parking Management System	Traffic Management Center		parking information		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Parking Management System	Transit Management Center		parking information		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Parking Management System	Transportation Information Center		parking information		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Media		traffic information for media		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center		route plan		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Media		traffic information for media		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Media		traveler information for media		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		multimodal information		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		parking information		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Travel Services Provider System	Transportation Information Center		travel service information		DDS: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Emergency Telecommunications System		incident information for public		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Maint and Constr Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Maint and Constr Management Center		evacuation information		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Other Emergency Management Centers		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Other Emergency Management Centers		incident report		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Rail Operations Center		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Rail Operations Center		evacuation information		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center		emergency route request		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center		evacuation information		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transit Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transit Management Center		evacuation information		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transportation Information Center		evacuation information		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Emergency Management Center		hazmat information		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Emergency Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Emergency Management Centers	Emergency Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Emergency Management Centers	Emergency Management Center		incident report		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Rail Operations Center	Emergency Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Shelter Provider Center	Emergency Management Center		shelter information		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Shelter Provider Center	Transportation Information Center		shelter information		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Emergency Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Traffic Management Center		Emergency Management Center		emergency routes	DDS: Incident Management -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center		Emergency Management Center		emergency plan coordination	DDS: Incident Management -  OMG DDS	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	DDS: NTCIP CCTV -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		traffic images	DDS: NTCIP CCTV -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	DDS: NTCIP CCTV -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		video surveillance control	DDS: NTCIP CCTV -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Emissions Management Center		emissions situation data	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emissions Management Center		ITS Roadway Equipment		air quality sensor control	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		environmental sensor data	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Emissions Management Center		air quality sensor data	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Maint and Constr Management Center		environmental sensor data	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		ITS Roadway Equipment		environmental sensors control	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		environmental sensors control	DDS: NTCIP Environmental Sensors -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		lighting system status	DDS: NTCIP Lighting -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		lane management control	DDS: NTCIP Message Sign -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	DDS: NTCIP Message Sign -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	DDS: NTCIP Message Sign -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	DDS: NTCIP Message Sign -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	DDS: NTCIP Ramp Meters -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		traffic metering control	DDS: NTCIP Ramp Meters -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		Transit Management Center		traffic control priority status	DDS: NTCIP Signal Priority -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal preemption request	DDS: NTCIP Signal Priority -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request	DDS: NTCIP Signal Priority -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	DDS: NTCIP Signal Priority -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	DDS: NTCIP Signal System Masters -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	DDS: NTCIP Signal System Masters -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	DDS: NTCIP Signal System Masters -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		pedestrian location information	DDS: NTCIP Traffic Signal -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal service request	DDS: NTCIP Traffic Signal -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	DDS: NTCIP Traffic Signal -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	DDS: NTCIP Traffic Signal -  OMG DDS RPC	DDS has not been adopted by the C-ITS community.	



Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control coordination	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		signal control status	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control coordination	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	DDS: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		traffic situation data	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment		Transportation Information Center		traffic situation data	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Other ITS Roadway Equipment		roadway detector coordination	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other ITS Roadway Equipment		ITS Roadway Equipment		roadway detector coordination	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	DDS: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emergency Management Center		ITS Roadway Equipment		work zone warning device control	DDS: NTCIP Warning Device - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Emergency Management Center		work zone warning status	DDS: NTCIP Warning Device - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	DDS: NTCIP Warning Device - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center		ITS Roadway Equipment		work zone warning device control	DDS: NTCIP Warning Device - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Check Equipment		Commercial Vehicle Administration Center		driver log	DDS: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle OBE Service Provider		Commercial Vehicle Check Equipment		driver log	DDS: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle OBE Service Provider		Fleet and Freight Management Center		driver log	DDS: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Commercial Vehicle OBE Service Provider	Other CVOBE Service Provider	driver log	DDS: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.			
Connected Vehicle Roadside Equipment	Commercial Vehicle Administration Center	driver log	DDS: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.			
Fleet and Freight Management Center	Commercial Vehicle Administration Center	driver log	DDS: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.			
Other CVOBE Service Provider	Commercial Vehicle OBE Service Provider	driver log	DDS: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.			
Connected Vehicle Roadside Equipment	Parking Management System	commercial vehicle identification	DDS: SAE J3067 (J2735 SE) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.			
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	DDS: SAE Other J2735 - OMG DDS				
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	DDS: SAE Signal Control Messages - OMG DDS RPC	DDS has not been adopted by the C-ITS community.			
Alternate Mode Transportation Center	Transit Management Center	multimodal service data	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Alternate Mode Transportation Center	Transit Management Center	service information response	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Alternate Mode Transportation Center	Transportation Information Center	multimodal service data	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Emergency Management Center	Transit Management Center	emergency transit service request	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Other Transit Management Centers	Transit Management Center	transit service coordination	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Other Transportation Information Centers	Transportation Information Center	transit service information	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Transit Management Center	transit service change request	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Transportation Information Center	transit service change request	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Alternate Mode Transportation Center	service information request	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Alternate Mode Transportation Center	transit multimodal information	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Emergency Management Center	emergency transit service response	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Emissions Management Center	transit and fare schedules	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Other Transit Management Centers	transit service coordination	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Parking Management System	transit schedule adherence information	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Parking Management System	transit schedule information	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Traffic Management Center	traffic control priority request	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Traffic Management Center	transit system data	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Transportation Information Center	demand responsive transit plan	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Transportation Information Center	emergency transit schedule information	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Transportation Information Center	transit and fare schedules	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Transportation Information Center	transit incident information	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Transportation Information Center	transit schedule adherence information	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transit Management Center	Transportation Information Center	transit trip plan	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transportation Information Center	Alternate Mode Transportation Center	service information request	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transportation Information Center	Other Transportation Information Centers	transit service information	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transportation Information Center	Transit Management Center	demand responsive transit request	DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.			
Data Distribution System	Other Data Distribution Systems	data subscription	Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.			
Data Distribution System	Other Data Distribution Systems	data subscription	Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.			
Data Distribution System	Personal Information Device	data publication	Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.			

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Data Distribution System	Personal Information Device		data publication		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Transportation Information Center	Transit Management Center		transit service change request		DDS: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection System	Traffic Management Center		border wait times data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection System	Transportation Information Center		border crossing status information		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Archived Data Center		center archive data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Data Distribution System		operational data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Data Distribution System		traveler information distribution data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Maint and Constr Management Center		equipment maintenance request		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center		route restrictions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers		route restrictions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Transportation Information Center		route restrictions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Center		operational data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Center		regional situation data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Traffic Management Center		environmental conditions data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Traffic Management Center		equipment maintenance status		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Traffic Management Center		work zone information		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transit Management Center		current infrastructure restrictions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center		current infrastructure restrictions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center		environmental conditions data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center		maint and constr work plans		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center		road weather information		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center		work zone information		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center		route restrictions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center		device control request		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center		device data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center		device status		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center		incident information		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center		road network conditions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center		traffic image meta data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center		traffic images		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		emergency traveler information		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		incident information		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		road network conditions		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		traffic image meta data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		traffic images		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Service Monitor System	Center		RSE fault data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Service Monitor System	Maint and Constr Management Center		RSE fault data		DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	



Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Surface Transportation Weather Service	Emergency Management Center		transportation weather information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Surface Transportation Weather Service	Maint and Constr Management Center	transportation weather information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Surface Transportation Weather Service	Traffic Management Center		transportation weather information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Surface Transportation Weather Service	Transportation Information Center	transportation weather information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Emergency Management Center		emergency traffic control information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Emergency Management Center	incident information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Emergency Management Center		road network conditions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Emissions Management Center	road network conditions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Fleet and Freight Management Center		road network conditions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Fleet and Freight Management Center	route restrictions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Maint and Constr Management Center		equipment maintenance request	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Maint and Constr Management Center	field equipment status	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Maint and Constr Management Center		incident information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Maint and Constr Management Center	road network conditions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Other Traffic Management Centers		device control request	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Other Traffic Management Centers	device data	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Other Traffic Management Centers		device status	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Other Traffic Management Centers	incident information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Other Traffic Management Centers		road network conditions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Other Traffic Management Centers	traffic image meta data	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Other Traffic Management Centers		traffic images	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Transit Management Center	incident information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Transit Management Center		road network conditions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Transportation Information Center	incident information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Transportation Information Center		regional situation data	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Transportation Information Center	road network conditions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Transportation Information Center		traffic control information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Traffic Management Center	Transportation Information Center	traffic image meta data	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Traffic Management Center	Transportation Information Center		traffic images	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Transportation Information Center	Archived Data Center	regional situation data	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transportation Information Center	Emergency Management Center		corridor operational strategies	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Transportation Information Center	Maint and Constr Management Center	corridor operational strategies	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transportation Information Center	Other Transportation Information Centers		emergency traveler information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Transportation Information Center	Other Transportation Information Centers	incident information	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transportation Information Center	Other Transportation Information Centers		road network conditions	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Transportation Information Center	Other Transportation Information Centers	traffic image meta data	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			
Transportation Information Center	Other Transportation Information Centers		traffic images	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.		
Transportation Information Center	Traffic Management Center	corridor operational strategies	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.			

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Transportation Information Center	Traffic Management Center			regional situation data	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Transit Management Center			corridor operational strategies	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Tunnel Management System	Maint and Constr Management Center			field equipment status	DDS: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Freight Distribution and Logistics Center			freight transportation status	DDS: UBL - OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Intermodal Customer System			freight transportation status	DDS: UBL - OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Intermodal Terminal			freight transportation status	DDS: UBL - OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Customer System	Freight Distribution and Logistics Center			freight transport booking	DDS: UBL - OMG DDS	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE status	US: NTCIP Generic Objects - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	US: NTCIP Generic Objects - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Field Support Equipment	Connected Vehicle Roadside Equipment			RSE status	US: NTCIP Generic Objects - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Field Support Equipment	ITS Roadway Equipment			field equipment commands	US: NTCIP Generic Objects - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Field Support Equipment	ITS Roadway Equipment			field equipment configuration settings	US: NTCIP Generic Objects - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Field Support Equipment			field equipment status	US: NTCIP Generic Objects - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Maint and Constr Management Center			field device status	US: NTCIP Generic Objects - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Maint and Constr Management Center			field equipment status	US: NTCIP Generic Objects - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Wayside Equipment			rail crossing blockage notification	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Wayside Equipment			rail crossing operational status	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			track status	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Wayside Equipment			rail crossing blockage notification	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Wayside Equipment			rail crossing operational status	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Multi-Modal Crossing	Connected Vehicle Roadside Equipment			multimodal crossing status	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Multi-Modal Crossing	ITS Roadway Equipment			multimodal crossing status	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Wayside Equipment	Connected Vehicle Roadside Equipment			track status	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Wayside Equipment	ITS Roadway Equipment			track status	F-F: Highway-Rail Field Interface - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Center	Data Distribution System			data provision	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Data Distribution System			data query	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Data Distribution System			data subscription	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Center			data publication	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Center			data query publication	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Other Data Distribution Systems			data provision	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Other Data Distribution Systems			data publication	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Other Data Distribution Systems			data query	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Other Data Distribution Systems			data query publication	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Other Data Distribution Systems			data subscription	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Personal Information Device			data publication	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Personal Information Device			data query publication	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Vehicle OBE			data publication	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	
Data Distribution System	Vehicle OBE			data query publication	Flow-Specific Data - OMG DDS	DDS has not been adopted by the C-ITS community.	







Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Other Data Distribution Systems	Data Distribution System		data query		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Other Data Distribution Systems	Data Distribution System		data query publication		Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Other Data Distribution Systems	Data Distribution System		data query publication		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Other Data Distribution Systems	Data Distribution System		data subscription		Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Transportation Information Center	Other Transportation Information Centers		emergency traveler information		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		incident information		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		road network conditions		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		traffic image meta data		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		traffic images		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Traffic Management Center		corridor operational strategies		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Traffic Management Center		regional situation data		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Transit Management Center		corridor operational strategies		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Tunnel Management System	Maint and Constr Management Center		field equipment status		US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Data Distribution Systems	Data Distribution System		data subscription		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Personal Information Device	Data Distribution System		data provision		Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Personal Information Device	Data Distribution System		data provision		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Personal Information Device	Data Distribution System		data query		Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Personal Information Device	Data Distribution System		data query		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Personal Information Device	Data Distribution System		data subscription		Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Personal Information Device	Data Distribution System		data subscription		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Vehicle OBE	Data Distribution System		data provision		Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Vehicle OBE	Data Distribution System		data provision		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Vehicle OBE	Data Distribution System		data query		Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Vehicle OBE	Data Distribution System		data query		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Vehicle OBE	Data Distribution System		data subscription		Flow-Specific Data - Apache Kafka	Kafka has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Vehicle OBE	Data Distribution System		data subscription		Flow-Specific Data - Apache Kafka	Zookeeper has been used on a few specific ITS projects, such as the USDOT JPO's Operational Data Environment (ODE), but has not received broad review by the ITS industry.	
Fleet and Freight Management Center	Transportation Information Center		route request		US: ATIS -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		multimodal information		US: ATIS -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		parking information		US: ATIS -  OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Parking Management System	Traffic Management Center		parking information		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Parking Management System	Transit Management Center		parking information		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Parking Management System	Transportation Information Center		parking information		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Media		traffic information for media		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center		route plan		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Media		traffic information for media		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Media		traveler information for media		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		multimodal information		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		parking information		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Travel Services Provider System	Transportation Information Center		travel service information		US: ATIS - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Emergency Telecommunications System		incident information for public		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Maint and Constr Management Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Maint and Constr Management Center		evacuation information		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Other Emergency Management Centers		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Other Emergency Management Centers		incident report		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Rail Operations Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Rail Operations Center		evacuation information		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center		emergency route request		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center		evacuation information		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transit Management Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transit Management Center		evacuation information		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transportation Information Center		evacuation information		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Emergency Management Center		hazmat information		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Emergency Management Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Emergency Management Centers	Emergency Management Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Emergency Management Centers	Emergency Management Center		incident report		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Rail Operations Center	Emergency Management Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Shelter Provider Center	Emergency Management Center		shelter information		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Shelter Provider Center	Transportation Information Center		shelter information		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Emergency Management Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Emergency Management Center		emergency routes		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Emergency Management Center		emergency plan coordination		US: Incident Management - OMG DDS	DDS has not been adopted by the C-ITS community.	
ITS Roadway Payment Equipment	Traffic Management Center		incident report		US: Incident Management - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Maint and Constr Management Center		traffic images		US: NTCIP CCTV - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center		traffic images		US: NTCIP CCTV - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	ITS Roadway Equipment		video surveillance control		US: NTCIP CCTV - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment		video surveillance control		US: NTCIP CCTV - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Emissions Management Center			emissions situation data	US: NTCIP Environmental Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	ITS Roadway Equipment			air quality sensor control	US: NTCIP Environmental Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			environmental sensor data	US: NTCIP Environmental Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Emissions Management Center			air quality sensor data	US: NTCIP Environmental Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Maint and Constr Management Center			environmental sensor data	US: NTCIP Environmental Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center			environmental sensor data	US: NTCIP Environmental Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center			lighting system status	US: NTCIP Lighting - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment			lighting system control data	US: NTCIP Lighting - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			roadway dynamic signage data	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			roadway dynamic signage status	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Maint and Constr Management Center			roadway dynamic signage status	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Other ITS Roadway Equipment			dynamic sign coordination	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center			roadway dynamic signage status	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center			roadway warning system status	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center			variable speed limit status	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	ITS Roadway Equipment			roadway dynamic signage data	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other ITS Roadway Equipment	ITS Roadway Equipment			dynamic sign coordination	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment			lane management control	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment			roadway dynamic signage data	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment			roadway warning system control	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment			variable speed limit control	US: NTCIP Message Sign - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center			traffic metering status	US: NTCIP Ramp Meters - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment			traffic metering control	US: NTCIP Ramp Meters - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transit Management Center			traffic control priority status	US: NTCIP Signal Priority - OMG DDS	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	US: NTCIP Signal Priority - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	US: NTCIP Signal Priority - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center			right-of-way request notification	US: NTCIP Signal Priority - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Archived Data Center			regional situation data	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Emergency Management Center			corridor operational strategies	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Emergency Management Center			road network conditions	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Emergency Management Center			road weather advisories	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Emissions Management Center			corridor operational strategies	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center			incident information	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center			road network conditions	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Fleet and Freight Management Center			road weather advisories	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Maint and Constr Management Center			corridor operational strategies	US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	



Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Traffic Management Center	ITS Roadway Equipment		signal control commands		US: NTCIP Signal System Masters - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment		signal control device configuration		US: NTCIP Signal System Masters - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment		signal system configuration		US: NTCIP Signal System Masters - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		pedestrian location information		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		signal service request		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		conflict monitor status		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		intersection control status		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		pedestrian crossing status		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Other ITS Roadway Equipment		signal control coordination		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Other ITS Roadway Equipment		signal control data		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center		pedestrian safety warning status		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center		signal control status		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other ITS Roadway Equipment	ITS Roadway Equipment		signal control coordination		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other ITS Roadway Equipment	ITS Roadway Equipment		signal control data		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment		pedestrian safety warning control		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment		signal control plans		US: NTCIP Traffic Signal - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		traffic situation data		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Traffic Management Center		traffic situation data		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Transportation Information Center		traffic situation data		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Maint and Constr Management Center		speed monitoring information		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Maint and Constr Management Center		traffic detector data		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Other ITS Roadway Equipment		roadway detector coordination		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center		speed monitoring information		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Traffic Management Center		traffic detector data		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	ITS Roadway Equipment		speed monitoring control		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	ITS Roadway Equipment		traffic detector control		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Other ITS Roadway Equipment	ITS Roadway Equipment		roadway detector coordination		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment		speed monitoring control		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	ITS Roadway Equipment		traffic detector control		US: NTCIP Transportation Sensors - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	ITS Roadway Equipment		work zone warning device control		US: NTCIP Warning Device - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Emergency Management Center		work zone warning status		US: NTCIP Warning Device - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Maint and Constr Management Center		work zone warning status		US: NTCIP Warning Device - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	ITS Roadway Equipment		work zone warning device control		US: NTCIP Warning Device - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Check Equipment	Commercial Vehicle Administration Center		driver log		US: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle OBE Service Provider	Commercial Vehicle Check Equipment		driver log		US: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle OBE Service Provider	Fleet and Freight Management Center		driver log		US: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle OBE Service Provider	Other CVOBE Service Provider		driver log		US: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center		driver log		US: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Other CVOBE Service Provider	Commercial Vehicle OBE Service Provider		driver log		US: SAE J3067 (J2735 SE) - OMG DDS	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Administration Center		driver log		US: SAE J3067 (J2735 SE) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Emergency Management Center		emergency notification		US: SAE J3067 (J2735 SE) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Emergency Management Center		emergency notification relay		US: SAE J3067 (J2735 SE) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Connected Vehicle Roadside Equipment	Parking Management System		commercial vehicle identification		US: SAE J3067 (J2735 SE) - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		arriving train information		US: SAE Other J2735 - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Wayside Equipment	Connected Vehicle Roadside Equipment		arriving train information		US: SAE Other J2735 - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Wayside Equipment	ITS Roadway Equipment		arriving train information		US: SAE Other J2735 - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Map Update System	Center		intersection geometry		US: SAE Signal Control Messages - OMG DDS	DDS has not been adopted by the C-ITS community.	
Map Update System	Connected Vehicle Roadside Equipment		intersection geometry		US: SAE Signal Control Messages - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Map Update System	Connected Vehicle Roadside Equipment		roadway geometry		US: SAE Signal Control Messages - OMG DDS RPC	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transit Management Center		emergency transit service request		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transit Management Centers	Transit Management Center		transit service coordination		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center		transit service information		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transit Management Center		transit service change request		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transportation Information Center		transit service change request		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Emergency Management Center		emergency transit service response		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Emissions Management Center		transit and fare schedules		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Other Transit Management Centers		transit service coordination		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Parking Management System		transit schedule adherence information		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Parking Management System		transit schedule information		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Traffic Management Center		traffic control priority request		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Traffic Management Center		transit system data		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Transportation Information Center		demand responsive transit plan		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Transportation Information Center		emergency transit schedule information		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Transportation Information Center		transit and fare schedules		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Transportation Information Center		transit incident information		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Transportation Information Center		transit schedule adherence information		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transit Management Center	Transportation Information Center		transit trip plan		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Other Transportation Information Centers		transit service information		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Transit Management Center		demand responsive transit request		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Transportation Information Center	Transit Management Center		transit service change request		US: TCIP - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection System	Traffic Management Center		border wait times data		US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Border Inspection System	Transportation Information Center		border crossing status information		US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Archived Data Center		center archive data		US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Center	Maint and Constr Management Center		equipment maintenance request		US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Fleet and Freight Management Center		route restrictions		US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	
Commercial Vehicle Administration Center	Other CV Administration Centers		route restrictions		US: TMDD - OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Commercial Vehicle Administration Center	Transportation Information Center			route restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center			emergency traffic control request	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Traffic Management Center			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Emergency Management Center	Transportation Information Center			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Emissions Management Center	Transportation Information Center			air quality information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center			route restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Center			equipment maintenance status	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Commercial Vehicle Administration Center			current infrastructure restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Emergency Management Center			road weather information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Map Update System			current infrastructure restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Surface Transportation Weather Service			road weather information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Traffic Management Center			current infrastructure restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Traffic Management Center			environmental conditions data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Traffic Management Center			equipment maintenance status	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Traffic Management Center			work zone information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transit Management Center			current infrastructure restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center			current infrastructure restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center			environmental conditions data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center			maint and constr work plans	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center			road weather information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Maint and Constr Management Center	Transportation Information Center			work zone information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other CV Administration Centers	Commercial Vehicle Administration Center			route restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center			device control request	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center			device data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center			device status	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center			traffic image meta data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Traffic Management Centers	Traffic Management Center			traffic images	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center			emergency traveler information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center			traffic image meta data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Other Transportation Information Centers	Transportation Information Center			traffic images	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Service Monitor System	Center			RSE fault data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Service Monitor System	Maint and Constr Management Center			RSE fault data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Surface Transportation Weather Service	Emergency Management Center			transportation weather information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Surface Transportation Weather Service	Maint and Constr Management Center			transportation weather information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Surface Transportation Weather Service	Traffic Management Center			transportation weather information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Surface Transportation Weather Service	Transportation Information Center			transportation weather information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Emergency Management Center			emergency traffic control information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Emergency Management Center			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Emergency Management Center			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Emissions Management Center			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Fleet and Freight Management Center			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Fleet and Freight Management Center			route restrictions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Maint and Constr Management Center			equipment maintenance request	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Maint and Constr Management Center			field equipment status	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Maint and Constr Management Center			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Maint and Constr Management Center			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Other Traffic Management Centers			device control request	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Other Traffic Management Centers			device data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Other Traffic Management Centers			device status	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Other Traffic Management Centers			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Other Traffic Management Centers			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Other Traffic Management Centers			traffic image meta data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Other Traffic Management Centers			traffic images	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transit Management Center			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transit Management Center			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transportation Information Center			incident information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transportation Information Center			regional situation data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transportation Information Center			road network conditions	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transportation Information Center			traffic control information	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transportation Information Center			traffic image meta data	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Traffic Management Center	Transportation Information Center			traffic images	US: TMDD -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Freight Distribution and Logistics Center			freight transportation status	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Intermodal Customer System			freight transportation status	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Fleet and Freight Management Center	Intermodal Terminal			freight transportation status	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Intermodal Customer System			freight transportation status	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Freight Distribution and Logistics Center	Intermodal Terminal			freight transportation status	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Customer System	Fleet and Freight Management Center			freight transport booking	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Customer System	Fleet and Freight Management Center			freight transportation status	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Customer System	Freight Distribution and Logistics Center			freight transport booking	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Fleet and Freight Management Center			container delivery confirmation	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	
Intermodal Terminal	Fleet and Freight Management Center			freight transportation status	US: UBL -  OMG DDS	DDS has not been adopted by the C-ITS community.	



Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States	
Issue Description:	The specific dialogs for exchanging this data have not been fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Center	Data Distribution System	data provision	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Center	Data Distribution System	data query	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Center	Data Distribution System	data subscription	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Data Distribution System	Center	data publication	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Data Distribution System	Center	data query publication	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Data Distribution System	Other Data Distribution Systems	data provision	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Data Distribution System	Other Data Distribution Systems	data publication	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Data Distribution System	Other Data Distribution Systems	data query	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Data Distribution System	Other Data Distribution Systems	data query publication	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Data Distribution System	Other Data Distribution Systems	data subscription	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Other Data Distribution Systems	Data Distribution System	data provision	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Other Data Distribution Systems	Data Distribution System	data publication	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Other Data Distribution Systems	Data Distribution System	data query	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Other Data Distribution Systems	Data Distribution System	data query publication	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				
Other Data Distribution Systems	Data Distribution System	data subscription	Flow-Specific Data - NTCIP Messaging	NTCIP messaging defines how a process can subscribe and publish data, but does not provide a mechanism within the host to allow multipe processes to subscribe and publish information cooperatively.				

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States	
Issue Description:	This is open-source software rather than a documented interface specification standardized through a formal and open process.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Data Distribution System	Other Data Distribution Systems	data subscription	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data subscription	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Personal Information Device	data publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Personal Information Device	data publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Personal Information Device	data query publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Center	Data Distribution System	data provision	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Center	Data Distribution System	data provision	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Center	Data Distribution System	data query	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Center	Data Distribution System	data query	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Center	Data Distribution System	data subscription	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Center	Data Distribution System	data subscription	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Connected Vehicle Roadside Equipment	Data Distribution System	data provision	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Connected Vehicle Roadside Equipment	Data Distribution System	data provision	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Connected Vehicle Roadside Equipment	Data Distribution System	data query	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Connected Vehicle Roadside Equipment	Data Distribution System	data query	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Connected Vehicle Roadside Equipment	Data Distribution System	data subscription	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Connected Vehicle Roadside Equipment	Data Distribution System	data subscription	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Center	data publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Center	data publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Center	data query publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Center	data query publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Connected Vehicle Roadside Equipment	data publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Connected Vehicle Roadside Equipment	data publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Connected Vehicle Roadside Equipment	data query publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Connected Vehicle Roadside Equipment	data query publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data provision	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data provision	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data query	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data query	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data query publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				
Data Distribution System	Other Data Distribution Systems	data query publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Personal Information Device	data query publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.				
Data Distribution System	Vehicle OBE	data publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.				

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Data distribution technologies	Regional Applicability	Australia, European Union, United States
Data Distribution System		Vehicle OBE		data publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Data Distribution System		Vehicle OBE		data query publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Data Distribution System		Vehicle OBE		data query publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data provision	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data provision	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data query	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data query	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data query publication	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data query publication	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data subscription	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Other Data Distribution Systems		Data Distribution System		data subscription	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Personal Information Device		Data Distribution System		data provision	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Personal Information Device		Data Distribution System		data provision	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Personal Information Device		Data Distribution System		data query	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Personal Information Device		Data Distribution System		data query	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Personal Information Device		Data Distribution System		data subscription	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Personal Information Device		Data Distribution System		data subscription	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Vehicle OBE		Data Distribution System		data provision	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Vehicle OBE		Data Distribution System		data provision	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Vehicle OBE		Data Distribution System		data query	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Vehicle OBE		Data Distribution System		data query	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Vehicle OBE		Data Distribution System		data subscription	Flow-Specific Data - Apache Kafka	Kafka is an open-source software project, not a standardized specification.	
Vehicle OBE		Data Distribution System		data subscription	Flow-Specific Data - Apache Kafka	Zookeeper is open source software, not a standardized specification.	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability
Foundational	Urgent	Develop an ITS terminology standard	Develop an internationally acceptable ITS terminology standard, complete with a defined concept model as required by ISO 704.				Australia, European Union, United States, Japan

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Develop ITS-wide reference data model		Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description					Regional Applicability	
Foundational	Urgent	Develop ITS-wide reference data model	Develop an internationally representative ITS-wide reference data model that will enable better data sharing across disparate enterprise systems with data defined by different entities, working groups, and standards development organisations.					Australia, European Union, United States	
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.							Severity	High
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Map Update System		Connected Vehicle Roadside Equipment		roadway geometry	DDS: SAE Signal Control Messages - OMG DDS RPC				







Class	Foundational	Timeframe	Urgent	Proposed Resolution	Develop ITS-wide reference data model	Regional Applicability	Australia, European Union, United States	
Data Distribution System	Other Data Distribution Systems		data provision		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Data Distribution System	Other Data Distribution Systems	data publication		Flow-Specific Data - Apache Kafka		This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Data Distribution System	Other Data Distribution Systems		data query		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Data Distribution System	Personal Information Device	data query publication		Flow-Specific Data - Apache Kafka		This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Data Distribution System	Vehicle OBE		data publication		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Data Distribution System	Vehicle OBE	data query publication		Flow-Specific Data - Apache Kafka		This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Other Data Distribution Systems	Data Distribution System		data provision		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Other Data Distribution Systems	Data Distribution System	data publication		Flow-Specific Data - Apache Kafka		This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Other Data Distribution Systems	Data Distribution System		data query		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Other Data Distribution Systems	Data Distribution System	data query publication		Flow-Specific Data - Apache Kafka		This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Other Data Distribution Systems	Data Distribution System		data subscription		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Personal Information Device	Data Distribution System	data provision		Flow-Specific Data - Apache Kafka		This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Personal Information Device	Data Distribution System		data query		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Personal Information Device	Data Distribution System	data subscription		Flow-Specific Data - Apache Kafka		This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Vehicle OBE	Data Distribution System		data provision		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Vehicle OBE	Data Distribution System	data query		Flow-Specific Data - Apache Kafka		This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Vehicle OBE	Data Distribution System		data subscription		Flow-Specific Data - Apache Kafka	This information flow is a super-flow, the data content needs to be tailored to the specific need.		
Issue Description:	Data has been defined for SNMPv1, but needs to be updated to SNMPv3 format.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName			Notes		
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE status	US: NTCIP Generic Objects - SNMPv3			NTCIP 1201 data needs to be upgraded to SNMPv3.		
Connected Vehicle Roadside Equipment	Service Monitor System	RSE status	US: NTCIP Generic Objects - SNMPv3			NTCIP 1201 data needs to be upgraded to SNMPv3.		
Field Support Equipment	Connected Vehicle Roadside Equipment	RSE status	US: NTCIP Generic Objects - SNMPv3			NTCIP 1201 data needs to be upgraded to SNMPv3.		
Field Support Equipment	ITS Roadway Equipment	field equipment commands	US: NTCIP Generic Objects - SNMPv3			NTCIP 1201 data needs to be upgraded to SNMPv3.		
Field Support Equipment	ITS Roadway Equipment	field equipment configuration settings	US: NTCIP Generic Objects - SNMPv3			NTCIP 1201 data needs to be upgraded to SNMPv3.		
ITS Roadway Equipment	Field Support Equipment	field equipment status	US: NTCIP Generic Objects - SNMPv3			NTCIP 1201 data needs to be upgraded to SNMPv3.		
ITS Roadway Equipment	Maint and Constr Management Center	field device status	US: NTCIP Generic Objects - SNMPv3			NTCIP 1201 data needs to be upgraded to SNMPv3.		
ITS Roadway Equipment	Maint and Constr Management Center	field equipment status	US: NTCIP Generic Objects - SNMPv3			NTCIP 1201 data needs to be upgraded to SNMPv3.		
Class	Timeframe	Proposed Resolution	Description					Regional Applicability
Foundational	Urgent	Develop map message structures	Develop a model for exchanging detailed map information throughout the ITS environment.					Australia, European Union, United States

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Develop standard for electronic distribution of traffic regulations	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description			Regional Applicability	
Foundational	Urgent	Develop standard for electronic distribution of traffic regulations		Develop an internationally acceptable standard to enable the provision and management of electronic traffic regulations to enable proper operation of road users as they cross jurisdictional boundaries.			Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Transportation Information Center		Wide Area Information Disseminator		traffic-related regulations	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Traffic Regulatory Authority		Transportation Information Center		traffic-related regulations	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Wide Area Information Disseminator		traffic-related regulations	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Wide Area Information Disseminator		traffic-related regulations	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Personal Information Device		traffic-related regulations	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Vehicle OBE		traffic-related regulations	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Personal Information Device		traffic-related regulations	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Vehicle OBE		traffic-related regulations	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Traffic Regulatory Authority		Transportation Information Center		traffic-related regulations	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Wide Area Information Disseminator		traffic-related regulations	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Traffic Regulatory Authority		Transportation Information Center		traffic-related regulations	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.		
Wide Area Information Disseminator		Personal Information Device		traffic-related regulations	(None-Data) - Wide Area Broadcast (Upper)	Work on the upper layer standards related to this solution have not been started.		
Wide Area Information Disseminator		Vehicle OBE		traffic-related regulations	(None-Data) - Wide Area Broadcast (Upper)	Work on the upper layer standards related to this solution have not been started.		

Class	Foundational	Timeframe	Urgent	Proposed Resolution	Identifier registry	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Foundational	Urgent	Identifier registry	Implement a centralised identifier registry network that ensures the assignment of globally unique C-ITS identifiers.				Australia, European Union, United States	
Issue Description:	The standard defines a field which requires a globally unique identifier, but no registration authority exists to assign these values.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - AU IFCP	There is no registry defined for device identifiers				
Vehicle OBE	Center	device identification	(None-Data) - Mobile Internet (US)	There is no registry defined for device identifiers				
ITS Roadway Equipment	Center	device identification	(None-Data) - AU IFCP	There is no registry defined for device identifiers				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - EU-ICIP-C2F	There is no registry defined for device identifiers				
ITS Roadway Equipment	Center	device identification	(None-Data) - EU-ICIP-C2F	There is no registry defined for device identifiers				
ITS Roadway Equipment	Center	device identification	(None-Data) - OMG DDS RPC	There is no registry defined for device identifiers				
Personal Information Device	Center	device identification	(None-Data) - Mobile Internet (US)	There is no registry defined for device identifiers				
Personal Information Device	Center	device identification	(None-Data) - Mobile Internet (X.509)	There is no registry defined for device identifiers				
Vehicle OBE	Center	device identification	(None-Data) - Mobile Internet (X.509)	There is no registry defined for device identifiers				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - OMG DDS RPC	There is no registry defined for device identifiers				
ITS Roadway Equipment	Center	device identification	(None-Data) - SNMPv1	There is no registry defined for device identifiers				
ITS Roadway Equipment	Center	device identification	(None-Data) - SNMPv1/TLS	There is no registry defined for device identifiers				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - SNMPv3	There is no registry defined for device identifiers				
ITS Roadway Equipment	Center	device identification	(None-Data) - SNMPv3	There is no registry defined for device identifiers				



Class	Foundational	Timeframe	Urgent	Proposed Resolution	V-L: GeoNetworking	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Foundational	Urgent	V-L: GeoNetworking	Determine how to implement GeoNetworking without unduly flooding the network and, if feasible, prove out concept.				Australia, European Union	
Issue Description:	A feature of the protocol is not fully applicable in the given context, e.g. GeoNetworking multi-hop forwarding in 5.9 GHz channels.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Personal Information Device	Connected Vehicle Roadside Equipment	personal location	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Personal Information Device	Connected Vehicle Roadside Equipment	personal location	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Personal Information Device	Connected Vehicle Roadside Equipment	personal location	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Personal Information Device	Vehicle OBE	personal location	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Personal Information Device	Vehicle OBE	personal location	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Personal Information Device	Vehicle OBE	personal location	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Vehicle OBE	Other Vehicle OBEs	vehicle road information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Vehicle OBE	Other Vehicle OBEs	vehicle road information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Vehicle OBE	Other Vehicle OBEs	vehicle road information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Vehicle OBE	Other Vehicle OBEs	vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				

Class	Foundational	Timeframe	Urgent	Proposed Resolution	V-L: GeoNetworking	Regional Applicability	Australia, European Union
Vehicle OBE	Other Vehicle OBEs			vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE	Other Vehicle OBEs			vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE	Fleet and Freight Management Center			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE	Fleet and Freight Management Center			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Commercial Vehicle OBE	Fleet and Freight Management Center			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	











Class	Foundational	Timeframe	Urgent	Proposed Resolution	V-L: GeoNetworking	Regional Applicability	Australia, European Union
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	

Class	Foundational	Timeframe	Urgent	Proposed Resolution	V-L: GeoNetworking	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTp/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	

Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Class	Timeframe	Proposed Resolution	Description				Regional Applicability
Security	Urgent	C-C: Secure communications	Develop one or more internationally acceptable, secure, centre-to-centre communication standards and define rules on when to use which one. The standard(s) should include support for authentication, authorization, confidentiality, and non-repudiation, as needed.  Once the application layer standard(s) are developed, most ITS Information Layer standards will need to be updated to document data in appropriate format(s).				Australia, European Union, United States
Issue Description:	The document may be publicly available but it is not a formal standard developed according to open standards development rules and details may change prior to adoption as open standard.						SeverityMedium
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Weather Service	Traffic Management Center	weather information	(Out of Scope) - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Cellular Communications Provider	Traffic Management Center	comm-derived travel time data	(None-Data) - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Emergency Management Center	Traffic Management Center	emergency traffic control request	(None-Data) - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Intermodal Terminal	Traffic Management Center	intermodal freight event information	(None-Data) - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Emergency Management Center	emergency traffic control information	(None-Data) - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Intermodal Terminal	intermodal freight traffic confirmation	(None-Data) - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Map Update System	map update notification	(None-Data) - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Transit Management Center	traffic control priority status	EU: Data Transmodel - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Transit Management Center	Traffic Management Center	traffic control priority request	EU: Data Transmodel - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Alternate Mode Transportation Center	Traffic Management Center	alternate mode incident information	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Other Traffic Management Centers	Traffic Management Center	road network conditions	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Emergency Management Center	road network conditions	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Emissions Management Center	road network conditions	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Fleet and Freight Management Center	road network conditions	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Maint and Constr Management Center	road network conditions	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Other Traffic Management Centers	road network conditions	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Transit Management Center	road network conditions	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Transportation Information Center	road network conditions	EU: DATEX - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Alternate Mode Transportation Center	Traffic Management Center	alternate mode service demand info	EU: SIRI - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Media	traffic information for media	TPEG2 - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			
Traffic Management Center	Wide Area Information Disseminator	traffic information for media	TPEG2 - ODG-OCIT-C	OCIT-C is a proprietary protocol that requires special rights to use.			

Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States	
Issue Description:	The solution does not provide adequate communications security for the information triple, which potentially jeopardizes C-ITS operations.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Other Traffic Management Centers	device status	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.				
Traffic Management Center	Other Traffic Management Centers	road network conditions	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.				
Traffic Management Center	Parking Management System	parking demand management request	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.				
Traffic Management Center	Parking Management System	parking traffic information	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.				
Traffic Management Center	Parking Management System	transportation operational strategies	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.				
Traffic Management Center	Transit Management Center	dynamic bus lane status	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.				
Traffic Management Center	Transit Management Center	traffic control priority status	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.				
Traffic Management Center	Transportation Information Center	incident information	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.				
Authorizing Center	Center	permission request received	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Authorizing Center	Other Authorizing Centers	permission request coordination	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Cellular Communications Provider	Traffic Management Center	comm-derived travel time data	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Cellular Communications Provider	Transportation Information Center	comm-derived travel time data	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Center	Authorizing Center	permission request	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Center	Authorizing Center	permission update request	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Center	Maint and Constr Management Center	equipment maintenance request	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Center	Map Update System	map update notification	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Center	Service Monitor System	service maintenance request	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Center	Service Monitor System	system monitoring	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Data Distribution System	Service Monitor System	service maintenance request	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Data Distribution System	Service Monitor System	support system status	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Emergency Management Center	Traffic Management Center	emergency traffic control request	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Emissions Management Center	Transportation Information Center	air quality information	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Fleet and Freight Management Center	Intermodal Terminal	freight transportation status	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Fleet and Freight Management Center	Transportation Information Center	route request	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Intermodal Terminal	Fleet and Freight Management Center	freight transportation status	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Intermodal Terminal	Traffic Management Center	intermodal freight event information	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Maint and Constr Management Center	Map Update System	current infrastructure restrictions	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Map Update System	Center	map updates	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Map Update System	Other Map Update Systems	map update coordination	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Other Authorizing Centers	Authorizing Center	permission request coordination	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				
Other Map Update Systems	Map Update System	map update coordination	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security				

Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Other Transportation Information Centers	Transportation Information Center			multimodal information	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Other Transportation Information Centers	Transportation Information Center			transit service information	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Parking Management System	Map Update System			parking facility geometry	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Privacy Protection Gateway	Center			protected location and address flow	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Service Monitor System	Center			RSE fault data	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Service Monitor System	Center			service maintenance status	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Service Monitor System	Data Distribution System			service maintenance status	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Service Monitor System	Maint and Constr Management Center			RSE fault data	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Service Monitor System	Wide Area Information Disseminator			service maintenance status	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Emergency Management Center			emergency traffic control information	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Intermodal Terminal			intermodal freight traffic confirmation	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Map Update System			map update notification	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Regulatory Authority	Transportation Information Center			traffic-related regulations	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Fleet and Freight Management Center			route plan	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Media			traveler information for media	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Other Transportation Information Centers			multimodal information	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Other Transportation Information Centers			transit service information	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Wide Area Information Disseminator			traffic-related regulations	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Wide Area Information Disseminator			traveler information for media	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Wide Area Information Disseminator	Service Monitor System			service maintenance request	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Wide Area Information Disseminator	Service Monitor System			support system status	(None-Data) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Emergency Management Center			emergency traffic control information	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Emergency Management Center			incident information	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Emergency Management Center			road network conditions	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Emissions Management Center			low emissions zone coordination	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Enforcement Center			lane violation notification	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Intermodal Terminal			intermodal freight traffic confirmation	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Maint and Constr Management Center			incident information	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Parking Management System	Payment Administration Center			service payment information	(Out of Scope) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Weather Service	Traffic Management Center			weather information	(Out of Scope) - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Archived Data Center	Archived Data User Systems			archive analysis results	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Archived Data Center	Archived Data User Systems			archive request confirmation	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	



Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Archived Data Center	Archived Data User Systems		archived data products		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Archived Data Center	Center	archive requests		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Archived Data Center	Center		archive status		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Archived Data Center	Government Reporting Systems	government reporting system data		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Archived Data User Systems	Archived Data Center		archive analysis requests		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Archived Data User Systems	Archived Data Center	archived data product requests		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Authorizing Center	Center		permission request received		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Authorizing Center	Other Authorizing Centers	permission request coordination		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection Administration Center	Border Inspection System		consolidated agency response		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection Administration Center	Border Inspection System	manifest data		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection Administration Center	Border Inspection System		traveler personal information		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection Administration Center	Fleet and Freight Management Center	clearance notification		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection Administration Center	Freight Distribution and Logistics Center		clearance notification		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection Administration Center	Intermodal Customer System	clearance notification		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection System	Border Inspection Administration Center		border security input		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection System	Border Inspection Administration Center	inspection results		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Border Inspection System	Commercial Vehicle Administration Center		arrival notification		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Cellular Communications Provider	Transportation Information Center	comm-derived travel time data		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Authorizing Center		permission request		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Authorizing Center	permission update request		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Data Distribution System		operational data		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Data Distribution System	traveler information distribution data		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Maint and Constr Management Center		equipment maintenance request		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Map Update System	map update notification		(None-Data) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Service Monitor System		service maintenance request		(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	



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Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Other Transportation Information Centers	Transportation Information Center			traffic image meta data	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Transportation Information Centers	Transportation Information Center			traffic images	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Transportation Information Centers	Transportation Information Center			transit service information	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Parking Management System	Map Update System			parking facility geometry	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Parking Management System	Other Parking Management Systems			parking coordination	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Parking Management System	Transportation Information Center			parking reservation confirmation	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Payment Administration Center	Parking Management System			vehicle payment request	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Privacy Protection Gateway	Center			protected location and address flow	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Security Credentials Registry	Commercial Vehicle Check Equipment			security credentials	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Service Monitor System	Center			RSE fault data	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Service Monitor System	Center			service maintenance status	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Service Monitor System	Data Distribution System			service maintenance status	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Service Monitor System	Maint and Constr Management Center			RSE fault data	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Service Monitor System	Wide Area Information Disseminator			service maintenance status	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Storage Facility Data Acquisition System	Maint and Constr Management Center			maintenance materials storage status	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Surface Transportation Weather Service	Traffic Management Center			transportation weather information	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Maint and Constr Management Center			road network conditions	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Map Update System			map update notification	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Media			traffic information for media	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Other Traffic Management Centers			device data	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Transportation Information Center			road network conditions	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Transportation Information Center			traffic control information	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Transportation Information Center			traffic image meta data	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Transportation Information Center			traffic images	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Wide Area Information Disseminator			traffic information for media	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	





Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Transportation Information Center	Surface Transportation Weather Service			road network environmental situation data	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Traffic Management Center			road network environmental situation data	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Wide Area Information Disseminator			traffic information for media	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Wide Area Information Disseminator			traffic-related regulations	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Wide Area Information Disseminator			traveler information for media	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Travel Services Provider System	Transportation Information Center			travel service reservations	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Wide Area Information Disseminator	Service Monitor System			service maintenance request	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Wide Area Information Disseminator	Service Monitor System			support system status	(None-Data) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Cellular Communications Provider	Traffic Management Center			comm-derived travel time data	(None-Data) - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Emergency Management Center	Traffic Management Center			emergency traffic control request	(None-Data) - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Intermodal Terminal	Traffic Management Center			intermodal freight event information	(None-Data) - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Emergency Management Center			emergency traffic control information	(None-Data) - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Intermodal Terminal			intermodal freight traffic confirmation	(None-Data) - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Map Update System			map update notification	(None-Data) - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Weather Service	Traffic Management Center			weather information	(Out of Scope) - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Fleet and Freight Management Center	Transportation Information Center			route request	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Transportation Information Centers	Transportation Information Center			multimodal information	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Transportation Information Centers	Transportation Information Center			parking information	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Parking Management System	Traffic Management Center			parking information	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Transportation Information Center			incident information	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Transportation Information Center			road network conditions	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Transportation Information Center			traffic control information	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Transportation Information Center			traffic demand management information	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Transportation Information Center			traffic image meta data	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Transportation Information Center			traffic images	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Fleet and Freight Management Center			incident information	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Fleet and Freight Management Center			road network conditions	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Other Transportation Information Centers			incident information	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Other Transportation Information Centers			parking information	EU: DATEX - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	



Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Transportation Information Center	Other Transportation Information Centers	road network conditions		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Other Transportation Information Centers	traffic image meta data		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Transit Management Center	traffic control priority status		EU: Data Transmodel - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Transit Management Center	Traffic Management Center	traffic control priority request		EU: Data Transmodel - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Transit Management Center	Transportation Information Center	transit and fare schedules		EU: Data Transmodel - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Transit Management Center	traffic control priority status		EU: Data Transmodel - ODG-OCIT-C		OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Transit Management Center	Traffic Management Center	traffic control priority request		EU: Data Transmodel - ODG-OCIT-C		OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Alternate Mode Transportation Center	Traffic Management Center	alternate mode incident information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Emergency Management Center	Transportation Information Center	incident information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Maint and Constr Management Center	Center	equipment maintenance status		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Maint and Constr Management Center	Traffic Management Center	work zone information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Maint and Constr Management Center	Transportation Information Center	maint and constr work plans		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Maint and Constr Management Center	Transportation Information Center	roadway maintenance status		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Maint and Constr Management Center	Transportation Information Center	work zone information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Other Traffic Management Centers	Traffic Management Center	device data		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Other Traffic Management Centers	Traffic Management Center	device status		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Other Traffic Management Centers	Traffic Management Center	road network conditions		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Other Transportation Information Centers	Transportation Information Center	incident information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Other Transportation Information Centers	Transportation Information Center	parking information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Other Transportation Information Centers	Transportation Information Center	road network conditions		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Other Transportation Information Centers	Transportation Information Center	traffic image meta data		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Other Transportation Information Centers	Transportation Information Center	traffic images		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Parking Management System	Traffic Management Center	parking information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Parking Management System	Transit Management Center	parking information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Parking Management System	Transportation Information Center	parking information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Surface Transportation Weather Service	Traffic Management Center	transportation weather information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Emergency Management Center	incident information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Emergency Management Center	road network conditions		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Maint and Constr Management Center	incident information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Maint and Constr Management Center	road network conditions		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Other Traffic Management Centers	device data		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Other Traffic Management Centers	device status		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Other Traffic Management Centers	road network conditions		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Other Transportation Information Centers	traffic images		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Traffic Management Center	road network environmental situation data		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Wide Area Information Disseminator	broadcast traveler information		EU: DATEX - DATEX Messaging TCP		The DATEX Messaging standard does not provide any application layer security	

Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Alternate Mode Transportation Center	Traffic Management Center		alternate mode incident information		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Other Traffic Management Centers	Traffic Management Center		road network conditions		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Emergency Management Center		road network conditions		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Emissions Management Center		road network conditions		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Fleet and Freight Management Center		road network conditions		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Maint and Constr Management Center		road network conditions		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Other Traffic Management Centers		road network conditions		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Transit Management Center		road network conditions		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Transportation Information Center		road network conditions		EU: DATEX - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Map Update System	Center		intersection geometry		EU: Signal Control Messages - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Alternate Mode Transportation Center	Traffic Management Center		alternate mode service demand info		EU: SIRI - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transit Management Center	Transportation Information Center		transit schedule adherence information		EU: SIRI - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Alternate Mode Transportation Center	Traffic Management Center		alternate mode service demand info		EU: SIRI - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Center	Data Distribution System		data provision		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Data Distribution System		data query		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Center	Data Distribution System		data subscription		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Data Distribution System	Center		data publication		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Data Distribution System	Center		data query publication		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Data Distribution System	Other Data Distribution Systems		data provision		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Data Distribution System	Other Data Distribution Systems		data publication		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Data Distribution System	Other Data Distribution Systems		data query		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Data Distribution System	Other Data Distribution Systems		data query publication		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Data Distribution System	Other Data Distribution Systems		data subscription		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Data Distribution Systems	Data Distribution System		data provision		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Data Distribution Systems	Data Distribution System		data publication		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Data Distribution Systems	Data Distribution System		data query		Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	

Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Other Data Distribution Systems	Data Distribution System			data query publication	Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Data Distribution Systems	Data Distribution System			data subscription	Flow-Specific Data - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Emergency Management Center	Emergency Telecommunications System			incident information for public	US: Incident Management - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Emergency Management Center	Maint and Constr Management Center			emergency plan coordination	US: Incident Management - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Emergency Management Center	Maint and Constr Management Center			evacuation information	US: Incident Management - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Emergency Management Center	Other Emergency Management Centers			emergency plan coordination	US: Incident Management - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Emergency Management Center	Other Emergency Management Centers			incident report	US: Incident Management - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Emergency Management Center	Rail Operations Center			emergency plan coordination	US: Incident Management - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Emergency Management Center	Rail Operations Center			evacuation information	US: Incident Management - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Fleet and Freight Management Center	Freight Distribution and Logistics Center			freight transportation status	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Connected Vehicle Roadside Equipment	Intermodal Terminal			container identification	ISO: Equipment Identification - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Media			traffic information for media	TPEG2 - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Traffic Management Center	Wide Area Information Disseminator			traffic information for media	TPEG2 - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Media			traffic information for media	TPEG2 - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Wide Area Information Disseminator			traffic information for media	TPEG2 - DATEX Messaging TCP	The DATEX Messaging standard does not provide any application layer security	
Transportation Information Center	Wide Area Information Disseminator			broadcast traveler information	TPEG2 - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Media			traffic information for media	TPEG2 - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Traffic Management Center	Wide Area Information Disseminator			traffic information for media	TPEG2 - ODG-OCIT-C	OCIT-C can be implemented over secure connections but does not provide any native security that should be included with central systems.	
Parking Management System	Transit Management Center			parking information	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Parking Management System	Transportation Information Center			parking information	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Media			traffic information for media	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Fleet and Freight Management Center			route plan	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Media			traffic information for media	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Media			traveler information for media	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Other Transportation Information Centers			multimodal information	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center	Other Transportation Information Centers			parking information	US: ATIS - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	



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Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Intermodal Terminal		container location		US: SAE J3067 (J2735 SE) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Fleet and Freight Management Center	Commercial Vehicle Administration Center	driver log		US: SAE J3067 (J2735 SE) - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other CVOBE Service Provider	Commercial Vehicle OBE Service Provider		driver log		US: SAE J3067 (J2735 SE) - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Map Update System	Center	intersection geometry		US: SAE Signal Control Messages - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Emergency Management Center		road network conditions		US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Emissions Management Center	road network conditions		US: TMDD - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Fleet and Freight Management Center		road network conditions		US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Fleet and Freight Management Center	route restrictions		US: TMDD - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Maint and Constr Management Center		equipment maintenance request		US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Maint and Constr Management Center	field equipment status		US: TMDD - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Maint and Constr Management Center		incident information		US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Maint and Constr Management Center	road network conditions		US: TMDD - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Alternate Mode Transportation Center	Transit Management Center		multimodal service data		US: TCIP - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Alternate Mode Transportation Center	Transit Management Center	service information response		US: TCIP - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Alternate Mode Transportation Center	Transportation Information Center		multimodal service data		US: TCIP - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Connected Vehicle Roadside Equipment	Public Information Device	transit vehicle information		US: TCIP - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Emergency Management Center	Transit Management Center		emergency transit service request		US: TCIP - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Transit Management Centers	Transit Management Center	transit service coordination		US: TCIP - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Other Transportation Information Centers	Transportation Information Center		transit service information		US: TCIP - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Personal Information Device	Transit Management Center	transit stop request		US: TCIP - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Public Information Device	Connected Vehicle Roadside Equipment		transit stop request		US: TCIP - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Public Information Device	Connected Vehicle Roadside Equipment	transit traveler information		US: TCIP - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Public Information Device	Transit Management Center		transit stop request		US: TCIP - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Transit Management Center	transit service change request		US: TCIP - NTCIP Messaging		Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Traffic Management Center	Transportation Information Center		transit service change request		US: TCIP - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	



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Class	Security	Timeframe	Urgent	Proposed Resolution	C-C: Secure communications	Regional Applicability	Australia, European Union, United States
Transportation Information Center		Other Transportation Information Centers		incident information	US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center		Other Transportation Information Centers		road network conditions	US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center		Other Transportation Information Centers		traffic image meta data	US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center		Other Transportation Information Centers		traffic images	US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center		Traffic Management Center		corridor operational strategies	US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center		Traffic Management Center		regional situation data	US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Transportation Information Center		Transit Management Center		corridor operational strategies	US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Tunnel Management System		Maint and Constr Management Center		field equipment status	US: TMDD - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Fleet and Freight Management Center		Intermodal Customer System		freight transportation status	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Fleet and Freight Management Center		Intermodal Terminal		freight transportation status	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Freight Distribution and Logistics Center		Intermodal Customer System		freight transportation status	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Freight Distribution and Logistics Center		Intermodal Terminal		freight transportation status	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Intermodal Customer System		Fleet and Freight Management Center		freight transport booking	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Intermodal Customer System		Fleet and Freight Management Center		freight transportation status	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Intermodal Customer System		Freight Distribution and Logistics Center		freight transport booking	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Intermodal Terminal		Fleet and Freight Management Center		container delivery confirmation	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	
Intermodal Terminal		Fleet and Freight Management Center		freight transportation status	US: UBL - NTCIP Messaging	Application level authentication is not addressed by this communication profile. While it provides TransNet layer security, the Facilities (OSI Application) Layer does not authenticate the user for the service being provided.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Core authorization - base services	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Security	Urgent	Core authorization - base services	Develop an internationally acceptable standard for the user permission sets, permission request, permission update request, permission request received, and device identification information triples contained within the Core Authorization Service Package.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - AU IFCP	There is no registry defined for device identifiers				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Center	device identification	(None-Data) - AU IFCP	There is no registry defined for device identifiers				
Vehicle OBE	Center	device identification	(None-Data) - Mobile Internet (US)	There is no registry defined for device identifiers				
Vehicle OBE	Center	device identification	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Center	device identification	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Authorizing Center	Center	permission request received	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Center	Authorizing Center	permission request	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Center	Authorizing Center	permission update request	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - EU-ICIP-C2F	There is no registry defined for device identifiers				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Center	device identification	(None-Data) - EU-ICIP-C2F	There is no registry defined for device identifiers				
ITS Roadway Equipment	Center	device identification	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Authorizing Center	Center	permission request received	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Authorizing Center	Cooperative ITS Credentials Management System	user permission sets	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Center	Authorizing Center	permission request	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Center	Authorizing Center	permission update request	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Authorizing Center	Center	permission request received	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Center	Authorizing Center	permission request	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Center	Authorizing Center	permission update request	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Center	device identification	(None-Data) - OMG DDS RPC	There is no registry defined for device identifiers				
ITS Roadway Equipment	Center	device identification	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Personal Information Device	Center	device identification	(None-Data) - Mobile Internet (US)	There is no registry defined for device identifiers				
Personal Information Device	Center	device identification	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Personal Information Device	Center	device identification	(None-Data) - Mobile Internet (X.509)	There is no registry defined for device identifiers				
Personal Information Device	Center	device identification	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Center	device identification	(None-Data) - Mobile Internet (X.509)	There is no registry defined for device identifiers				
Vehicle OBE	Center	device identification	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Authorizing Center	Center	permission request received	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Center	Authorizing Center	permission request	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Center	Authorizing Center	permission update request	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - OMG DDS RPC	There is no registry defined for device identifiers				

Class	Security	Timeframe	Urgent	Proposed Resolution	Core authorization - base services	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Center			device identification	(None-Data) - OMG DDS RPC		Work on the upper layer standards related to this solution have not been started.
ITS Roadway Equipment	Center			device identification	(None-Data) - SNMPv1	There is no registry defined for device identifiers	
ITS Roadway Equipment	Center			device identification	(None-Data) - SNMPv1		Work on the upper layer standards related to this solution have not been started.
ITS Roadway Equipment	Center			device identification	(None-Data) - SNMPv1/TLS	There is no registry defined for device identifiers	
ITS Roadway Equipment	Center			device identification	(None-Data) - SNMPv1/TLS		Work on the upper layer standards related to this solution have not been started.
Connected Vehicle Roadside Equipment	Center			device identification	(None-Data) - SNMPv3	There is no registry defined for device identifiers	
Connected Vehicle Roadside Equipment	Center			device identification	(None-Data) - SNMPv3		Work on the upper layer standards related to this solution have not been started.
ITS Roadway Equipment	Center			device identification	(None-Data) - SNMPv3	There is no registry defined for device identifiers	
ITS Roadway Equipment	Center			device identification	(None-Data) - SNMPv3		Work on the upper layer standards related to this solution have not been started.

Class	Security	Timeframe	Urgent	Proposed Resolution	Credentials management system	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Security	Urgent	Credentials management system	Implement regional (security) credentials management systems that are interoperable.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Cooperative ITS Credentials Management System	Object Registration and Discovery Service	security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Object Registration and Discovery Service	security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Center	Cooperative ITS Credentials Management System	device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Center	Cooperative ITS Credentials Management System	misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Cooperative ITS Credentials Management System	device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Cooperative ITS Credentials Management System	misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Center	security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Center	security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Center	security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Connected Vehicle Roadside Equipment	security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Connected Vehicle Roadside Equipment	security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Connected Vehicle Roadside Equipment	security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Data Distribution System	security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Data Distribution System	security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Data Distribution System	security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Object Registration and Discovery Service	security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Service Monitor System	security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Service Monitor System	security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Service Monitor System	security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Cooperative ITS Credentials Management System	Wide Area Information Disseminator	security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				

Class	Security	Timeframe	Urgent	Proposed Resolution	Credentials management system	Regional Applicability	Australia, European Union, United States
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Data Distribution System		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Data Distribution System		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Object Registration and Discovery Service		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Object Registration and Discovery Service		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Service Monitor System		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Service Monitor System		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security credential revocations	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security credentials	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security policy and networking information	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Object Registration and Discovery Service		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Object Registration and Discovery Service		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Personal Information Device		security credential revocations	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Personal Information Device		security credentials	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Personal Information Device		security policy and networking information	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Vehicle OBE		security credential revocations	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Vehicle OBE		security credentials	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Vehicle OBE		security policy and networking information	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Personal Information Device		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Personal Information Device		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Vehicle OBE		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Credentials management system	Regional Applicability	Australia, European Union, United States
Vehicle OBE		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security credential revocations	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security credentials	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security policy and networking information	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Security Credentials Registry		Commercial Vehicle Check Equipment		security credentials	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.	
Commercial Vehicle Check Equipment		Commercial Vehicle OBE Service Provider		security credentials	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.	
Security Credentials Registry		Commercial Vehicle Check Equipment		security credentials	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.	
Commercial Vehicle Check Equipment		Commercial Vehicle OBE Service Provider		security credentials	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.	



Class	Security	Timeframe	Urgent	Proposed Resolution	C-V: Secure communications	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Security	Urgent	C-V: Secure communications	Develop one or more internationally acceptable, secure, centre-vehicle communication standards and define rules on when to use each one. The standard(s) should include support for authentication, authorization, confidentiality, and non-repudiation, as needed. Once the application layer standard(s) are developed, most ITS Information Layer standards will need to be updated to document data in appropriate format(s).				Australia, European Union, United States	
Issue Description:	The solution does not provide adequate communications security for the information triple, which potentially jeopardizes C-ITS operations.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Application-level authentication not provided.				
Traffic Management Center	Media	traffic information for media	EU: TPEG2 - Internet (X.509)	Application-level authentication not provided.				
Transportation Information Center	Media	traffic information for media	EU: TPEG2 - Internet (X.509)	Application-level authentication not provided.				
Transportation Information Center	Media	traveler information for media	EU: TPEG2 - Internet (X.509)	Application-level authentication not provided.				
Transportation Information Center	Wide Area Information Disseminator	traveler information for media	EU: TPEG2 - Internet (X.509)	Application-level authentication not provided.				
Vehicle OBE	Transportation Information Center	vehicle environmental data	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.				
Vehicle OBE	Transportation Information Center	vehicle environmental data	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided				
Vehicle OBE	Transportation Information Center	vehicle situation data	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.				
Vehicle OBE	Transportation Information Center	vehicle situation data	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided				
Transportation Information Center	Wide Area Information Disseminator	broadcast traveler information	TMC - Internet (US)	The application layer security defined in ISO 14819-6 needs to be updated to reflect other C-ITS security standards.				
Transportation Information Center	Personal Information Device	broadcast traveler information	TMC - Wide Area Broadcast (Upper)	The application layer security defined in ISO 14819-6 needs to be updated to reflect other C-ITS security standards.				
Transportation Information Center	Vehicle OBE	broadcast traveler information	TMC - Wide Area Broadcast (Upper)	The application layer security defined in ISO 14819-6 needs to be updated to reflect other C-ITS security standards.				
Wide Area Information Disseminator	Personal Information Device	wide area broadcast traveler information	TMC - Wide Area Broadcast (Upper)	The application layer security defined in ISO 14819-6 needs to be updated to reflect other C-ITS security standards.				
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	TMC - Wide Area Broadcast (Upper)	The application layer security defined in ISO 14819-6 needs to be updated to reflect other C-ITS security standards.				
Wide Area Information Disseminator	Vehicle OBE	wide area broadcast traveler information	TMC - Wide Area Broadcast (Upper)	The application layer security defined in ISO 14819-6 needs to be updated to reflect other C-ITS security standards.				
Traffic Management Center	Media	traffic information for media	TPEG2 - DATEX Messaging TCP	Application-level authentication not provided.				
Traffic Management Center	Wide Area Information Disseminator	traffic information for media	TPEG2 - DATEX Messaging TCP	Application-level authentication not provided.				
Transportation Information Center	Media	traffic information for media	TPEG2 - DATEX Messaging TCP	Application-level authentication not provided.				
Transportation Information Center	Wide Area Information Disseminator	traffic information for media	TPEG2 - DATEX Messaging TCP	Application-level authentication not provided.				
Traffic Management Center	Wide Area Information Disseminator	traffic information for media	TPEG2 - Guaranteed Internet (X.509)	Application-level authentication not provided.				
Transportation Information Center	Wide Area Information Disseminator	broadcast traveler information	TPEG2 - Guaranteed Internet (X.509)	Application-level authentication not provided.				
Transportation Information Center	Wide Area Information Disseminator	traffic information for media	TPEG2 - Guaranteed Internet (X.509)	Application-level authentication not provided.				
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Application-level authentication not provided.				
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Application-level authentication not provided.				
Connected Vehicle Roadside Equipment	Vehicle OBE	road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	Application-level authentication not provided.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Application-level authentication not provided.				
Connected Vehicle Roadside Equipment	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	Application-level authentication not provided.				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Application-level authentication not provided.				

Class	Security	Timeframe	Urgent	Proposed Resolution	C-V: Secure communications	Regional Applicability	Australia, European Union, United States
Maint and Constr Vehicle OBE	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	Application-level authentication not provided.			
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	TPEG2 - Local Broadcast Wireless (US)	Application-level authentication not provided.			
Emergency Management Center	Emergency Vehicle OBE	suggested route	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Fleet and Freight Management Center	Commercial Vehicle OBE	road weather advisories	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Maint and Constr Management Center	Personal Information Device	road weather advisories	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Maint and Constr Management Center	Vehicle OBE	road weather advisories	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Maint and Constr Management Center	Vehicle OBE	work zone information	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Traffic Management Center	Vehicle OBE	lane closure information	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Traffic Management Center	Vehicle OBE	speed management information	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Transportation Information Center	Vehicle OBE	road weather advisories	TPEG2 - Mobile Internet (US)	Application-level authentication not provided.			
Data Distribution System	Personal Information Device	traveler information	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Data Distribution System	Vehicle OBE	traveler information	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Emergency Management Center	Emergency Vehicle OBE	suggested route	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Maint and Constr Management Center	Vehicle OBE	work zone information	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Traffic Management Center	Personal Information Device	traffic demand management information	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Traffic Management Center	Vehicle OBE	lane closure information	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Traffic Management Center	Vehicle OBE	traffic demand management information	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Transportation Information Center	Vehicle OBE	road weather advisories	TPEG2 - Mobile Internet (X.509)	Application-level authentication not provided.			
Transportation Information Center	Wide Area Information Disseminator	broadcast traveler information	TPEG2 - NTCIP Messaging	Application-level authentication not provided.			
Traffic Management Center	Media	traffic information for media	TPEG2 - ODG-OCIT-C	Application-level authentication not provided.			
Traffic Management Center	Wide Area Information Disseminator	traffic information for media	TPEG2 - ODG-OCIT-C	Application-level authentication not provided.			
Transportation Information Center	Personal Information Device	broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Application-level authentication not provided.			
Transportation Information Center	Vehicle OBE	broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Application-level authentication not provided.			
Wide Area Information Disseminator	Personal Information Device	wide area broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Application-level authentication not provided.			
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Application-level authentication not provided.			
Wide Area Information Disseminator	Vehicle OBE	wide area broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	Application-level authentication not provided.			
Commercial Vehicle OBE	Fleet and Freight Management Center	vehicle environmental data	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.			
Commercial Vehicle OBE	Fleet and Freight Management Center	vehicle environmental data	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided			
Data Distribution System	Vehicle OBE	vehicle situation data parameters	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.			
Data Distribution System	Vehicle OBE	vehicle situation data parameters	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided			
Emergency Vehicle OBE	Emergency Management Center	emergency vehicle tracking data	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.			
Emergency Vehicle OBE	Emergency Management Center	emergency vehicle tracking data	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided			
Surface Transportation Weather Service	Vehicle OBE	transportation weather information	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.			
Surface Transportation Weather Service	Vehicle OBE	transportation weather information	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided			
Traffic Management Center	Vehicle OBE	intersection status	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.			
Traffic Management Center	Vehicle OBE	intersection status	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided			

Class	Security	Timeframe	Urgent	Proposed Resolution	C-V: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		Vehicle OBE		lane closure information	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.	
Traffic Management Center		Vehicle OBE		lane closure information	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided	
Transportation Information Center		Vehicle OBE		vehicle situation data parameters	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.	
Transportation Information Center		Vehicle OBE		vehicle situation data parameters	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided	
Vehicle OBE		Data Distribution System		vehicle situation data	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.	
Vehicle OBE		Data Distribution System		vehicle situation data	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided	
Vehicle OBE		Map Update System		vehicle location and motion for mapping	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.	
Vehicle OBE		Map Update System		vehicle location and motion for mapping	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Class	Timeframe	Proposed Resolution	Description				Regional Applicability
Security	Urgent	I-F: Secure communications	Develop one or more internationally acceptable, secure, centre-to-field communication standards and define rules on when to use each one. The standard(s) should include support for authentication, authorization, confidentiality, and non-repudiation, as needed.				Australia, European Union, United States
Issue Description:	The standards development organization has established a work item for the subject standard but a draft is not available for this critical feature to enable the interface. The draft may be missing due to the work item being new or simply a lack of activity on the work item.						SeverityHigh
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Center	Connected Vehicle Roadside Equipment	RSE application information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Center	Connected Vehicle Roadside Equipment	RSE application information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Center	Connected Vehicle Roadside Equipment	RSE application install/upgrade	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Center	Connected Vehicle Roadside Equipment	RSE application install/upgrade	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Center	Connected Vehicle Roadside Equipment	RSE control commands	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Center	Connected Vehicle Roadside Equipment	RSE control commands	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	Center	RSE application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	Center	RSE application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE application install/upgrade	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE application install/upgrade	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE configuration settings	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE configuration settings	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE control commands	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE control commands	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection infringement info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection infringement info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	pedestrian location information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution			



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			pedestrian location information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			roadway dynamic signage data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			roadway dynamic signage data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal service request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal service request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			traffic situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			traffic situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection safety application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			reduced speed warning status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			reduced speed warning status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment		Traffic Management Center		speed management application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Traffic Management Center		speed management application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Traffic Management Center		stop sign gap assist RSE status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Traffic Management Center		stop sign gap assist RSE status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic monitoring application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic monitoring application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Traffic Management Center		vehicle signage application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Traffic Management Center		vehicle signage application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Traffic Management Center		work zone application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Traffic Management Center		work zone application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Transportation Information Center		electric charging station information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Transportation Information Center		traveler information application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Transportation Information Center		traveler information application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE configuration settings	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE configuration settings	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE control commands	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE control commands	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Traffic Management Center		intersection safety application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Traffic Management Center			queue warning application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			queue warning application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			rail crossing application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			rail crossing application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Transportation Information Center			electric charging station information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Transportation Information Center			environmental situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Transportation Information Center			environmental situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Transportation Information Center			road weather advisory status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Transportation Information Center			road weather advisory status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			situation data collection parameters	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			situation data collection parameters	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			speed management application information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			speed management application information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection safety application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection safety application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			queue warning application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			queue warning application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			rail crossing application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			rail crossing application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Traffic Management Center			environmental sensor data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Traffic Management Center			pedestrian safety warning status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment	Traffic Management Center			pedestrian safety warning status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Traffic Management Center			rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment	Traffic Management Center			rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Traffic Management Center			rail crossing status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment	Traffic Management Center			rail crossing status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	Connected Vehicle Roadside Equipment			work zone application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	Connected Vehicle Roadside Equipment			work zone application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center	ITS Roadway Equipment			pedestrian safety warning control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	ITS Roadway Equipment			pedestrian safety warning control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	Connected Vehicle Roadside Equipment			work zone application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			work zone application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			pedestrian safety warning control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			pedestrian safety warning control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			rail crossing control data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			rail crossing control data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			rail crossing request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			rail crossing request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			roadway advisory radio data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			roadway advisory radio data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Center			device identification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Center			device identification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Center			protected location and address flow	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Center			protected location and address flow	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Center			RSE application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Center			RSE application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Center			device identification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment	Center			device identification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			arriving train information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			arriving train information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			conflict monitor status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			conflict monitor status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			environmental sensor data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			environmental sensor data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			intersection control status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			intersection control status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			pedestrian crossing status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			pedestrian crossing status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		roadway dynamic signage status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		roadway dynamic signage status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		rail crossing blockage notification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		rail crossing blockage notification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		rail crossing status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		rail crossing status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Map Update System		Connected Vehicle Roadside Equipment		map updates	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Connected Vehicle Roadside Equipment		map updates	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System		Connected Vehicle Roadside Equipment		parking facility geometry	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Connected Vehicle Roadside Equipment		parking facility geometry	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System		Connected Vehicle Roadside Equipment		roadway geometry	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Connected Vehicle Roadside Equipment		roadway geometry	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System		Parking Management System		parking facility geometry	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Parking Management System		parking facility geometry	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System		Public Information Device		map updates	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Public Information Device		map updates	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Multi-Modal Crossing		Connected Vehicle Roadside Equipment		multimodal crossing status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Multi-Modal Crossing		Connected Vehicle Roadside Equipment		multimodal crossing status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Multi-Modal Crossing		ITS Roadway Equipment		multimodal crossing status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Multi-Modal Crossing		ITS Roadway Equipment		multimodal crossing status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Other Connected Vehicle Roadside Equipment		Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Other Connected Vehicle Roadside Equipment		Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Connected Vehicle Roadside Equipment		parking management application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Connected Vehicle Roadside Equipment		parking management application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Map Update System		parking facility geometry	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Map Update System		parking facility geometry	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Traffic Management Center		parking information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Traffic Management Center		parking information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Transit Management Center		parking information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Transit Management Center		parking information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Transportation Information Center		parking information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Transportation Information Center		parking information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Payment Administration Center	Connected Vehicle Roadside Equipment			vehicle payment request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Payment Administration Center	Connected Vehicle Roadside Equipment			vehicle payment request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			intersection management application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			intersection management application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			intersection safety application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			intersection safety application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			queue warning application information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			queue warning application information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			rail crossing application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			rail crossing application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			reduced speed warning info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			reduced speed warning info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			stop sign gap assist info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			stop sign gap assist info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			traffic monitoring application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			traffic monitoring application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			vehicle signage application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			vehicle signage application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			roadway warning system control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			roadway warning system control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			signal system configuration	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			signal system configuration	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			speed monitoring control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			speed monitoring control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			stop sign gap assist control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			stop sign gap assist control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			traffic detector control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			traffic detector control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			traffic metering control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			traffic metering control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center	ITS Roadway Equipment			video surveillance control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment			video surveillance control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Transportation Information Center	Connected Vehicle Roadside Equipment			road weather advisory info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Transportation Information Center	Connected Vehicle Roadside Equipment			road weather advisory info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Transportation Information Center	Connected Vehicle Roadside Equipment			traveler information application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Transportation Information Center	Connected Vehicle Roadside Equipment			traveler information application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Tunnel Management System	Connected Vehicle Roadside Equipment			vehicle signage application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Tunnel Management System	Connected Vehicle Roadside Equipment			vehicle signage application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Wayside Equipment	Connected Vehicle Roadside Equipment			arriving train information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Wayside Equipment	Connected Vehicle Roadside Equipment			arriving train information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Wayside Equipment	Connected Vehicle Roadside Equipment			track status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Wayside Equipment	Connected Vehicle Roadside Equipment			track status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Wayside Equipment	ITS Roadway Equipment			arriving train information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Wayside Equipment	ITS Roadway Equipment			arriving train information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Wayside Equipment	ITS Roadway Equipment			track status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Wayside Equipment	ITS Roadway Equipment			track status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Center	Connected Vehicle Roadside Equipment			RSE application information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Center	Connected Vehicle Roadside Equipment			RSE application information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Center	Connected Vehicle Roadside Equipment			RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Center	Connected Vehicle Roadside Equipment			RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Center	Connected Vehicle Roadside Equipment			RSE control commands	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Center	Connected Vehicle Roadside Equipment			RSE control commands	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Data Distribution System			local situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Data Distribution System			local situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE configuration settings	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE configuration settings	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE control commands	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE control commands	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			environmental situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			environmental situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection infringement info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection infringement info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			pedestrian location information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			pedestrian location information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal service request	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal service request	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			traffic situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			traffic situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			reduced speed warning status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			reduced speed warning status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			speed management application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			speed management application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			stop sign gap assist RSE status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			stop sign gap assist RSE status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			traffic monitoring application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			traffic monitoring application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			traffic situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			traffic situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			vehicle signage application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			vehicle signage application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			work zone application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			work zone application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Transportation Information Center			electric charging station information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Transportation Information Center			electric charging station information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Transportation Information Center			environmental situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Transportation Information Center			environmental situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Transportation Information Center			road weather advisory status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Transportation Information Center			road weather advisory status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Transportation Information Center			traveler information application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Transportation Information Center			traveler information application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Wayside Equipment			rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Wayside Equipment			rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Wayside Equipment			rail crossing operational status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Wayside Equipment			rail crossing operational status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Data Distribution System		Connected Vehicle Roadside Equipment		local traveler information distribution data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Data Distribution System		Connected Vehicle Roadside Equipment		local traveler information distribution data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Data Distribution System		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Data Distribution System		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE configuration settings	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE configuration settings	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE control commands	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE control commands	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Center		device identification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Center		device identification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		environmental sensor data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		environmental sensor data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		noise data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		noise data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Other Traffic Signal Controller		local priority request details	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Other Traffic Signal Controller		local priority request details	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		signal control status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		signal control status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Maint and Constr Management Center	ITS Roadway Equipment			video surveillance control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System	Connected Vehicle Roadside Equipment			map updates	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System	Connected Vehicle Roadside Equipment			map updates	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System	Connected Vehicle Roadside Equipment			parking facility geometry	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System	Connected Vehicle Roadside Equipment			parking facility geometry	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System	Connected Vehicle Roadside Equipment			roadway geometry	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System	Connected Vehicle Roadside Equipment			roadway geometry	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System	Parking Management System			parking facility geometry	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System	Parking Management System			parking facility geometry	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System	Public Information Device			map updates	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System	Public Information Device			map updates	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Other Connected Vehicle Roadside Equipment	Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Other Connected Vehicle Roadside Equipment	Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Other ITS Roadway Equipment	ITS Roadway Equipment			signal control data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Other ITS Roadway Equipment	ITS Roadway Equipment			signal control data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Other Traffic Signal Controller	ITS Roadway Equipment			local priority request details	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Other Traffic Signal Controller	ITS Roadway Equipment			local priority request details	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Parking Management System	Connected Vehicle Roadside Equipment			parking management application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Parking Management System	Connected Vehicle Roadside Equipment			parking management application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Parking Management System	Connected Vehicle Roadside Equipment			vehicle signage local data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Parking Management System	Connected Vehicle Roadside Equipment			vehicle signage local data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	Connected Vehicle Roadside Equipment			intersection management application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	Connected Vehicle Roadside Equipment			intersection management application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	Connected Vehicle Roadside Equipment			intersection safety application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	Connected Vehicle Roadside Equipment			intersection safety application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	Connected Vehicle Roadside Equipment			queue warning application information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	Connected Vehicle Roadside Equipment			queue warning application information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	Connected Vehicle Roadside Equipment			rail crossing application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	Connected Vehicle Roadside Equipment			rail crossing application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	Connected Vehicle Roadside Equipment			reduced speed warning info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		speed management application information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		speed management application information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		stop sign gap assist info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		stop sign gap assist info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic monitoring application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic monitoring application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center		Connected Vehicle Roadside Equipment		electric charging services inventory	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Transportation Information Center		Connected Vehicle Roadside Equipment		electric charging services inventory	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center		Connected Vehicle Roadside Equipment		road weather advisory info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Transportation Information Center		Connected Vehicle Roadside Equipment		road weather advisory info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center		Connected Vehicle Roadside Equipment		traveler information application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Transportation Information Center		Connected Vehicle Roadside Equipment		traveler information application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Tunnel Management System		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Tunnel Management System		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Wayside Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Wayside Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Wayside Equipment		ITS Roadway Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Wayside Equipment		ITS Roadway Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Wayside Equipment		ITS Roadway Equipment		track status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Wayside Equipment		ITS Roadway Equipment		track status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Payment Administration Center		vehicle payment information	(Out of Scope) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Payment Administration Center		vehicle payment information	(Out of Scope) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Payment Administration Center		Connected Vehicle Roadside Equipment		vehicle payment request	(Out of Scope) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Payment Administration Center		Connected Vehicle Roadside Equipment		vehicle payment request	(Out of Scope) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		signal control plans	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		environmental sensors control	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		environmental sensors control	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection infringement info	EU: DEN Service - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection infringement info	EU: DEN Service - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Management - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Management - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Management - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Management - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Management - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Management - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center	Connected Vehicle Roadside Equipment			electric charging services inventory	EU: Electric Charging Hot Spot - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Transportation Information Center	Connected Vehicle Roadside Equipment			electric charging services inventory	EU: Electric Charging Hot Spot - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center	Connected Vehicle Roadside Equipment			electric charging services inventory	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Transportation Information Center	Connected Vehicle Roadside Equipment			electric charging services inventory	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Management - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Management - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System	Connected Vehicle Roadside Equipment			intersection geometry	EU: Signal Control Messages - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System	Connected Vehicle Roadside Equipment			intersection geometry	EU: Signal Control Messages - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States	
Issue Description:	The solution does not provide any significant security and a communications link using this solution is easily hacked.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Center	Connected Vehicle Roadside Equipment	RSE application information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Center	Connected Vehicle Roadside Equipment	RSE application information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Center	Connected Vehicle Roadside Equipment	RSE application install/upgrade	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Center	Connected Vehicle Roadside Equipment	RSE application install/upgrade	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Center	Connected Vehicle Roadside Equipment	RSE control commands	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Center	Connected Vehicle Roadside Equipment	RSE control commands	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	Center	device identification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	Center	RSE application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	Center	RSE application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE application install/upgrade	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE application install/upgrade	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE configuration settings	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE configuration settings	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE control commands	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE control commands	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection infringement info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection infringement info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	pedestrian location information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	pedestrian location information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	roadway dynamic signage data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	roadway dynamic signage data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.				



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal service request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal service request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			traffic situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			traffic situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			reduced speed warning status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			reduced speed warning status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			speed management application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			speed management application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			stop sign gap assist RSE status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			stop sign gap assist RSE status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Traffic Management Center		traffic monitoring application status		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center		traffic monitoring application status		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center		traffic situation data		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center		traffic situation data		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center		vehicle signage application status		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center		vehicle signage application status		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center		work zone application status		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center		work zone application status		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Transportation Information Center		road weather advisory status		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Transportation Information Center		road weather advisory status		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Transportation Information Center		traveler information application status		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Transportation Information Center		traveler information application status		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Wayside Equipment		rail crossing blockage notification		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Wayside Equipment		rail crossing blockage notification		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Wayside Equipment		rail crossing operational status		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Wayside Equipment		rail crossing operational status		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE application install/upgrade		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE application install/upgrade		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE configuration settings		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE configuration settings		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE control commands		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE control commands		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE status		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE status		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		conflict monitor status		AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		conflict monitor status		AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		conflict monitor status		AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		conflict monitor status		AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		conflict monitor status		AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard	
Connected Vehicle Roadside Equipment	Traffic Management Center		intersection safety application status		(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center		intersection safety application status		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Traffic Management Center			queue warning application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			queue warning application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			rail crossing application status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Traffic Management Center			rail crossing application status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Transportation Information Center			electric charging station information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Transportation Information Center			electric charging station information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Transportation Information Center			environmental situation data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Connected Vehicle Roadside Equipment	Transportation Information Center			environmental situation data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			situation data collection parameters	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			situation data collection parameters	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			speed management application information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			speed management application information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection safety application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection safety application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			queue warning application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			queue warning application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Traffic Management Center			environmental sensor data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment	Traffic Management Center			environmental sensor data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Traffic Management Center			pedestrian safety warning status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment	Traffic Management Center			pedestrian safety warning status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Traffic Management Center			rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment	Traffic Management Center			rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	Connected Vehicle Roadside Equipment			work zone application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	Connected Vehicle Roadside Equipment			work zone application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center	ITS Roadway Equipment			pedestrian safety warning control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center	Connected Vehicle Roadside Equipment			vehicle signage application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	Connected Vehicle Roadside Equipment			vehicle signage application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	Connected Vehicle Roadside Equipment			work zone application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center	Connected Vehicle Roadside Equipment		work zone application info		(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center	ITS Roadway Equipment	pedestrian safety warning control		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment		pedestrian safety warning control		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.
Traffic Management Center	ITS Roadway Equipment	rail crossing control data		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment		rail crossing control data		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.
Traffic Management Center	ITS Roadway Equipment	rail crossing request		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment		rail crossing request		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.
Traffic Management Center	ITS Roadway Equipment	roadway advisory radio data		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center	ITS Roadway Equipment		roadway advisory radio data		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.
Connected Vehicle Roadside Equipment	Center	device identification		(None-Data) - EU-ICIP-C2F		The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Center		device identification		(None-Data) - EU-ICIP-C2F		The security for the Centre-to-Field EU-ICIP protocol is not yet defined.
Connected Vehicle Roadside Equipment	Center	protected location and address flow		(None-Data) - EU-ICIP-C2F		The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Center		protected location and address flow		(None-Data) - EU-ICIP-C2F		The security for the Centre-to-Field EU-ICIP protocol is not yet defined.
Connected Vehicle Roadside Equipment	Center	RSE application status		(None-Data) - EU-ICIP-C2F		The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment	Center		device identification		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution
ITS Roadway Equipment	Center	device identification		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		arriving train information		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	arriving train information		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		conflict monitor status		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		environmental sensor data		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	environmental sensor data		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		intersection control status		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		pedestrian crossing status		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	pedestrian crossing status		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		reduced speed warning info		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	reduced speed warning info		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		roadway dynamic signage status		(None-Data) - AU IFCP		A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	roadway dynamic signage status		(None-Data) - AU IFCP		AU IFCP does not currently provide any significant security.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		rail crossing blockage notification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		rail crossing blockage notification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		rail crossing status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		rail crossing status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System		Connected Vehicle Roadside Equipment		map updates	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Connected Vehicle Roadside Equipment		map updates	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System		Connected Vehicle Roadside Equipment		parking facility geometry	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Connected Vehicle Roadside Equipment		parking facility geometry	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Map Update System		Connected Vehicle Roadside Equipment		roadway geometry	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Connected Vehicle Roadside Equipment		roadway geometry	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System		Parking Management System		parking facility geometry	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Parking Management System		parking facility geometry	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Map Update System		Public Information Device		map updates	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Map Update System		Public Information Device		map updates	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Multi-Modal Crossing		Connected Vehicle Roadside Equipment		multimodal crossing status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Multi-Modal Crossing		Connected Vehicle Roadside Equipment		multimodal crossing status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Multi-Modal Crossing		ITS Roadway Equipment		multimodal crossing status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Multi-Modal Crossing		ITS Roadway Equipment		multimodal crossing status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Other Connected Vehicle Roadside Equipment		Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Other Connected Vehicle Roadside Equipment		Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Connected Vehicle Roadside Equipment		parking management application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Connected Vehicle Roadside Equipment		parking management application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Map Update System		parking facility geometry	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Map Update System		parking facility geometry	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Traffic Management Center		parking information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Traffic Management Center		parking information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Transit Management Center		parking information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Transit Management Center		parking information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Parking Management System		Transportation Information Center		parking information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Parking Management System		Transportation Information Center		parking information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Payment Administration Center		Connected Vehicle Roadside Equipment		vehicle payment request	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Payment Administration Center		Connected Vehicle Roadside Equipment		vehicle payment request	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection management application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection management application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection safety application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection safety application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		Connected Vehicle Roadside Equipment		queue warning application information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		Connected Vehicle Roadside Equipment		queue warning application information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		Connected Vehicle Roadside Equipment		rail crossing application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		Connected Vehicle Roadside Equipment		rail crossing application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		Connected Vehicle Roadside Equipment		stop sign gap assist info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		Connected Vehicle Roadside Equipment		stop sign gap assist info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic monitoring application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic monitoring application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		traffic metering control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		traffic metering control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Transportation Information Center		Connected Vehicle Roadside Equipment		road weather advisory info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Transportation Information Center		Connected Vehicle Roadside Equipment		road weather advisory info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Transportation Information Center		Connected Vehicle Roadside Equipment		traveler information application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Transportation Information Center		Connected Vehicle Roadside Equipment		traveler information application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Tunnel Management System		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Tunnel Management System		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Wayside Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Wayside Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Wayside Equipment		ITS Roadway Equipment		arriving train information	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Wayside Equipment		ITS Roadway Equipment		arriving train information	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Wayside Equipment		ITS Roadway Equipment		track status	(None-Data) - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Wayside Equipment		ITS Roadway Equipment		track status	(None-Data) - AU IFCP	AU IFCP does not currently provide any significant security.	
Center		Connected Vehicle Roadside Equipment		RSE application information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Center		Connected Vehicle Roadside Equipment		RSE application information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Center		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Center		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Center		Connected Vehicle Roadside Equipment		RSE control commands	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Center		Connected Vehicle Roadside Equipment		RSE control commands	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Center		RSE application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Data Distribution System		local situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Data Distribution System		local situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE configuration settings	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE configuration settings	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE control commands	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE control commands	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		environmental situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		environmental situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection infringement info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection infringement info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			pedestrian location information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			pedestrian location information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal preemption request	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal priority service request	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal service request	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			signal service request	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			traffic situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			traffic situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Service Monitor System			RSE status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Traffic Management Center			rail crossing application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment		Traffic Management Center		rail crossing application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Traffic Management Center		reduced speed warning status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Traffic Management Center		reduced speed warning status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Traffic Management Center		speed management application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Traffic Management Center		speed management application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Traffic Management Center		stop sign gap assist RSE status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Traffic Management Center		stop sign gap assist RSE status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic monitoring application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic monitoring application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Traffic Management Center		vehicle signage application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Traffic Management Center		vehicle signage application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Traffic Management Center		work zone application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Traffic Management Center		work zone application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Transportation Information Center		electric charging station information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Transportation Information Center		electric charging station information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Transportation Information Center		environmental situation data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Transportation Information Center		environmental situation data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Transportation Information Center		road weather advisory status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Transportation Information Center		road weather advisory status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Transportation Information Center		traveler information application status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Transportation Information Center		traveler information application status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Data Distribution System		Connected Vehicle Roadside Equipment		local traveler information distribution data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Data Distribution System		Connected Vehicle Roadside Equipment		local traveler information distribution data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Data Distribution System		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Data Distribution System		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE configuration settings	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE configuration settings	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE control commands	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE control commands	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Center		device identification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Center		device identification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		environmental sensor data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		environmental sensor data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		noise data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		noise data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Other Traffic Signal Controller		local priority request details	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Other Traffic Signal Controller		local priority request details	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		rail crossing status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		rail crossing status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		signal control status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		signal control status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System		Connected Vehicle Roadside Equipment		map updates	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

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Map Update System		Connected Vehicle Roadside Equipment		map updates	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System		Connected Vehicle Roadside Equipment		parking facility geometry	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System		Connected Vehicle Roadside Equipment		parking facility geometry	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System		Connected Vehicle Roadside Equipment		roadway geometry	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System		Connected Vehicle Roadside Equipment		roadway geometry	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System		Parking Management System		parking facility geometry	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System		Parking Management System		parking facility geometry	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Map Update System		Public Information Device		map updates	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System		Public Information Device		map updates	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Other Connected Vehicle Roadside Equipment		Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Other Connected Vehicle Roadside Equipment		Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Other Traffic Signal Controller		ITS Roadway Equipment		local priority request details	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Other Traffic Signal Controller		ITS Roadway Equipment		local priority request details	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Parking Management System		Connected Vehicle Roadside Equipment		parking management application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Parking Management System		Connected Vehicle Roadside Equipment		parking management application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection management application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection management application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection safety application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		intersection safety application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		queue warning application information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		queue warning application information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		rail crossing application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		rail crossing application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		speed management application information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		speed management application information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		stop sign gap assist info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		stop sign gap assist info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic monitoring application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic monitoring application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Traffic Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Traffic Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center		Connected Vehicle Roadside Equipment		electric charging services inventory	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Transportation Information Center		Connected Vehicle Roadside Equipment		electric charging services inventory	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center		Connected Vehicle Roadside Equipment		road weather advisory info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Transportation Information Center		Connected Vehicle Roadside Equipment		road weather advisory info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center		Connected Vehicle Roadside Equipment		traveler information application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Transportation Information Center		Connected Vehicle Roadside Equipment		traveler information application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Tunnel Management System		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Tunnel Management System		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Wayside Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Wayside Equipment		Connected Vehicle Roadside Equipment		track status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Wayside Equipment		ITS Roadway Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Wayside Equipment		ITS Roadway Equipment		arriving train information	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Wayside Equipment		ITS Roadway Equipment		track status	(None-Data) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Wayside Equipment		ITS Roadway Equipment		track status	(None-Data) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request	(None-Data) - ODG-OCIT-O	OCIT-O does not provide any significant security.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	(None-Data) - ODG-OCIT-O	OCIT-O does not provide any significant security.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	(None-Data) - ODG-OCIT-O	OCIT-O does not provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	(None-Data) - ODG-OCIT-O	OCIT-O does not provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	(None-Data) - ODG-OCIT-O	OCIT-O does not provide any significant security.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	(None-Data) - ODG-OCIT-O	OCIT-O does not provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	(None-Data) - ODG-OCIT-O	OCIT-O does not provide any significant security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
DMV		ITS Roadway Equipment		registration	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Emissions Management Center		ITS Roadway Equipment		emissions sensor control	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Center		device identification	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Emissions Management Center		vehicle emissions data	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		infrastructure restriction warning status	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		lane management information	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		lane violation notification	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		rail crossing blockage notification	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		rail crossing status	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		infrastructure restriction warning control	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Connected Vehicle Roadside Equipment		Payment Administration Center		vehicle payment information	(Out of Scope) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Payment Administration Center		vehicle payment information	(Out of Scope) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Payment Administration Center		Connected Vehicle Roadside Equipment		vehicle payment request	(Out of Scope) - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Payment Administration Center		Connected Vehicle Roadside Equipment		vehicle payment request	(Out of Scope) - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard	
Traffic Management Center		ITS Roadway Equipment		signal control plans	AU TRAFF - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		signal control plans	AU TRAFF - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device	
Traffic Management Center		ITS Roadway Equipment		signal control plans	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
Traffic Management Center		ITS Roadway Equipment		signal control plans	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
ITS Roadway Equipment		Traffic Management Center		signal control status	AU TRAFF - AU TRAFF Comms	The TRAFF protocol is available via RMS but is not a published standard	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device	
Traffic Management Center		ITS Roadway Equipment		signal control commands	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	





Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		Commercial Vehicle OBE		intersection status	AU TRAFF - Mobile Internet (X.509)	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
Traffic Management Center		Commercial Vehicle OBE		intersection status	AU TRAFF - Mobile Internet (X.509)	The TRAFF protocol is available via RMS but is not a published standard	
Traffic Management Center		Emergency Vehicle OBE		intersection status	AU TRAFF - Mobile Internet (X.509)	No security is provided between the traffic controller and field device	
Traffic Management Center		Emergency Vehicle OBE		intersection status	AU TRAFF - Mobile Internet (X.509)	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link	
Traffic Management Center		Emergency Vehicle OBE		intersection status	AU TRAFF - Mobile Internet (X.509)	The TRAFF protocol is available via RMS but is not a published standard	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		environmental sensors control	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		environmental sensors control	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	DMS and RWIS data - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	DMS and RWIS data - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection infringement info	EU: DEN Service - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection infringement info	EU: DEN Service - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment		Electric Charging Station		vehicle charging profile	EU: Electric Charging Management - AU IFCP	AU IFCP does not currently provide any significant security.	
Electric Charging Station		Connected Vehicle Roadside Equipment		current charging status	EU: Electric Charging Management - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Electric Charging Station		Connected Vehicle Roadside Equipment		current charging status	EU: Electric Charging Management - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment		Electric Charging Station		vehicle charging profile	EU: Electric Charging Management - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment		Electric Charging Station		vehicle charging profile	EU: Electric Charging Management - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment		Maint and Constr Management Center		field device status	US: NTCIP Generic Objects - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Maint and Constr Management Center		field equipment status	US: NTCIP Generic Objects - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	US: NTCIP Signal System Masters - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center	ITS Roadway Equipment			signal system configuration	US: NTCIP Signal System Masters - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Transportation Information Center	Connected Vehicle Roadside Equipment			electric charging services inventory	EU: Electric Charging Hot Spot - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Transportation Information Center	Connected Vehicle Roadside Equipment			electric charging services inventory	EU: Electric Charging Hot Spot - AU IFCP	AU IFCP does not currently provide any significant security.	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Transportation Information Center	Connected Vehicle Roadside Equipment			electric charging services inventory	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Transportation Information Center	Connected Vehicle Roadside Equipment			electric charging services inventory	EU: Electric Charging Hot Spot - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	EU: Electric Charging Management - AU IFCP	A standardised I-F protocol is needed for Australia but no consensus exists. Adoption of an appropriate existing standard is a potential solution	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Management - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Electric Charging Station	Connected Vehicle Roadside Equipment			current charging status	EU: Electric Charging Management - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			intersection control status	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			ITS roadway equipment information	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
ITS Roadway Equipment	Other Traffic Signal Controller			local priority request details	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
ITS Roadway Equipment	Traffic Management Center			right-of-way request notification	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
ITS Roadway Equipment	Traffic Management Center			signal control status	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
Other Traffic Signal Controller	ITS Roadway Equipment			local priority request details	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			signal control commands	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			signal control device configuration	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			signal control plans	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
Traffic Management Center	ITS Roadway Equipment			signal system configuration	EU: OCIT-O Signal Control - OCIT-O	OCIT-O does not provide any significant security.	
Map Update System	Connected Vehicle Roadside Equipment			intersection geometry	EU: Signal Control Messages - EU-ICIP-C2F	The EC has identified the need to develop this communication profile, but there is no consensus as to what this might be.	
Map Update System	Connected Vehicle Roadside Equipment			intersection geometry	EU: Signal Control Messages - EU-ICIP-C2F	The security for the Centre-to-Field EU-ICIP protocol is not yet defined.	
ITS Roadway Equipment	Maint and Constr Management Center			traffic images	US: NTCIP CCTV - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment	Traffic Management Center			traffic images	US: NTCIP CCTV - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Maint and Constr Management Center	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Emissions Management Center	ITS Roadway Equipment			air quality sensor control	US: NTCIP Environmental Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment	Emissions Management Center			air quality sensor data	US: NTCIP Environmental Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Maint and Constr Management Center		environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Maint and Constr Management Center		ITS Roadway Equipment		environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		lighting system status	US: NTCIP Lighting - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		lighting system control data	US: NTCIP Lighting - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		lane management control	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	US: NTCIP Message Sign - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	US: NTCIP Ramp Meters - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		traffic metering control	US: NTCIP Ramp Meters - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	US: NTCIP Signal Priority - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	US: NTCIP Signal System Masters - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		signal control status	US: NTCIP Traffic Signal - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	US: NTCIP Traffic Signal - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	US: NTCIP Transportation Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	US: NTCIP Transportation Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Emergency Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Emergency Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	
Maint and Constr Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1	SNMPv1 is a legacy solution; new deployments are strongly encouraged to use a solution based on SNMPv3 with TLS security.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States	
Issue Description:	The document may be publicly available but it is not currently available as a formal standard and details may change prior to adoption as a standard.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU TRAFF Comms	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU TRAFF Comms	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU TRAFF Comms	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States	
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU IFCP	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU IFCP	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU IFCP	The TRAFF protocol is available via RMS but is not a published standard				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU TRAFF Comms	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU TRAFF Comms	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU TRAFF Comms	The TRAFF protocol is available via RMS but is not a published standard				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU TRAFF Comms	No security is provided between the traffic controller and field device				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU TRAFF Comms	The TRAFF protocol defines messages to the traffic controller but does not adequately define the centre-field link				

[illegible]



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States	
Issue Description:	The document may be publicly available but it is not a formal standard developed according to open standards development rules and details may change prior to adoption as open standard.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	signal priority service request	(None-Data) - ODG-OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
Connected Vehicle Roadside Equipment	Traffic Management Center	traffic situation data	(None-Data) - ODG-OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	(None-Data) - ODG-OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	(None-Data) - ODG-OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
ITS Roadway Equipment	Traffic Management Center	traffic detector data	(None-Data) - ODG-OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	(None-Data) - ODG-OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
Traffic Management Center	ITS Roadway Equipment	traffic detector control	(None-Data) - ODG-OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	ITS roadway equipment information	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
ITS Roadway Equipment	Other Traffic Signal Controller	local priority request details	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
ITS Roadway Equipment	Traffic Management Center	right-of-way request notification	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
ITS Roadway Equipment	Traffic Management Center	signal control status	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
Other Traffic Signal Controller	ITS Roadway Equipment	local priority request details	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
Traffic Management Center	ITS Roadway Equipment	signal control commands	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
Traffic Management Center	ITS Roadway Equipment	signal control plans	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				
Traffic Management Center	ITS Roadway Equipment	signal system configuration	EU: OCIT-O Signal Control - OCIT-O	OCIT-O is a proprietary protocol that requires special rights to use.				

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States	
Issue Description:	The proposed solution uses a suite of standards that is accepted within some communities, but has not necessarily been accepted for use within the context of this information triple.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Maint and Constr Vehicle OBE	roadway advisory radio status	(None-Data) - Mobile SNMPv3					
Maint and Constr Vehicle OBE	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - Mobile SNMPv3					
Personal Information Device	Service Monitor System	PID status	(None-Data) - Mobile SNMPv3					
DMV	ITS Roadway Equipment	registration	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
DMV	ITS Roadway Equipment	registration	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
Emissions Management Center	ITS Roadway Equipment	emissions sensor control	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
Emissions Management Center	ITS Roadway Equipment	emissions sensor control	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Center	device identification	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Center	device identification	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Emissions Management Center	vehicle emissions data	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Emissions Management Center	vehicle emissions data	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	infrastructure restriction warning status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	infrastructure restriction warning status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	lane management information	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	lane management information	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	lane violation notification	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	lane violation notification	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	rail crossing blockage notification	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	rail crossing blockage notification	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	rail crossing status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	rail crossing status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		roadway advisory radio status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		infrastructure restriction warning control	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		infrastructure restriction warning control	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Emissions Management Center		air quality sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Emissions Management Center		air quality sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Management Center		environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	US: NTCIP Signal System Masters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		signal control commands	US: NTCIP Signal System Masters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Maint and Constr Management Center	ITS Roadway Equipment			traffic detector control	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center	ITS Roadway Equipment			traffic detector control	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center	ITS Roadway Equipment			speed monitoring control	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic images	US: NTCIP CCTV - Mobile SNMPv3		
Maint and Constr Vehicle OBE	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - Mobile SNMPv3		
ITS Roadway Equipment	Maint and Constr Management Center			traffic images	US: NTCIP CCTV - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Maint and Constr Management Center			traffic images	US: NTCIP CCTV - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment	Traffic Management Center			traffic images	US: NTCIP CCTV - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Traffic Management Center			traffic images	US: NTCIP CCTV - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center	Maint and Constr Vehicle OBE			environmental sensors control	US: NTCIP Environmental Sensors - Mobile SNMPv3		
Maint and Constr Management Center	Maint and Constr Vehicle OBE			maint and constr vehicle system control	US: NTCIP Environmental Sensors - Mobile SNMPv3		
Maint and Constr Vehicle OBE	Maint and Constr Management Center			environmental sensor data	US: NTCIP Environmental Sensors - Mobile SNMPv3		
Maint and Constr Vehicle OBE	Maint and Constr Management Center			maint and constr vehicle operational data	US: NTCIP Environmental Sensors - Mobile SNMPv3		
Emissions Management Center	ITS Roadway Equipment			air quality sensor control	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Emissions Management Center	ITS Roadway Equipment			air quality sensor control	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment	Traffic Management Center			environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Traffic Management Center			environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Maint and Constr Management Center		field device status	US: NTCIP Generic Objects - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		field device status	US: NTCIP Generic Objects - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Management Center		field equipment status	US: NTCIP Generic Objects - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		field equipment status	US: NTCIP Generic Objects - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		lighting system status	US: NTCIP Lighting - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		lighting system status	US: NTCIP Lighting - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		lighting system control data	US: NTCIP Lighting - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		lighting system control data	US: NTCIP Lighting - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		roadway dynamic signage status	US: NTCIP Message Sign - Mobile SNMPv3		
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - Mobile SNMPv3		
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		roadway warning system status	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		lane management control	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		lane management control	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	US: NTCIP Ramp Meters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	US: NTCIP Ramp Meters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		traffic metering control	US: NTCIP Ramp Meters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		traffic metering control	US: NTCIP Ramp Meters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	US: NTCIP Signal Priority - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	US: NTCIP Signal Priority - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	US: NTCIP Signal System Masters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	US: NTCIP Signal System Masters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	US: NTCIP Signal System Masters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	US: NTCIP Signal System Masters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		signal control status	US: NTCIP Traffic Signal - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		signal control status	US: NTCIP Traffic Signal - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	US: NTCIP Traffic Signal - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		signal control plans	US: NTCIP Traffic Signal - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic detector data	US: NTCIP Transportation Sensors - Mobile SNMPv3		
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - Mobile SNMPv3		
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Emergency Management Center		Emergency Vehicle OBE		work zone warning device control	US: NTCIP Warning Device - Mobile SNMPv3		
Emergency Vehicle OBE		Emergency Management Center		work zone warning status	US: NTCIP Warning Device - Mobile SNMPv3		
Maint and Constr Management Center		Maint and Constr Vehicle OBE		work zone warning device control	US: NTCIP Warning Device - Mobile SNMPv3		
Emergency Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Emergency Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Emergency Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Emergency Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic images	US: TMDD - Mobile SNMPv3		

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States	
Issue Description:	The solution does not provide adequate communications security for the information triple, which potentially jeopardizes C-ITS operations.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
DMV	ITS Roadway Equipment	registration	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
DMV	ITS Roadway Equipment	registration	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
Emissions Management Center	ITS Roadway Equipment	emissions sensor control	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
Emissions Management Center	ITS Roadway Equipment	emissions sensor control	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Center	device identification	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Center	device identification	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Emissions Management Center	vehicle emissions data	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Emissions Management Center	vehicle emissions data	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	infrastructure restriction warning status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	infrastructure restriction warning status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	lane management information	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	lane management information	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	lane violation notification	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	lane violation notification	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	rail crossing blockage notification	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	rail crossing blockage notification	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	rail crossing status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	rail crossing status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate				
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.				



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		stop sign gap assist status	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		infrastructure restriction warning control	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		infrastructure restriction warning control	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	(None-Data) - UTMCI	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
ITS Roadway Equipment		Emissions Management Center		air quality sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Emissions Management Center		air quality sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Management Center		environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Management Center		field device status	US: NTCIP Generic Objects - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		field device status	US: NTCIP Generic Objects - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		signal control commands	US: NTCIP Signal System Masters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center	ITS Roadway Equipment		signal control commands		US: NTCIP Signal System Masters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center	ITS Roadway Equipment	signal control device configuration		US: NTCIP Signal System Masters - SNMPv1/TLS		Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center	ITS Roadway Equipment		speed monitoring control		US: NTCIP Transportation Sensors - SNMPv1/TLS		Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate
Maint and Constr Management Center	ITS Roadway Equipment	speed monitoring control		US: NTCIP Transportation Sensors - SNMPv1/TLS		The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center	ITS Roadway Equipment		traffic detector control		US: NTCIP Transportation Sensors - SNMPv1/TLS		Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate
Maint and Constr Management Center	ITS Roadway Equipment	traffic detector control		US: NTCIP Transportation Sensors - SNMPv1/TLS		The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center	ITS Roadway Equipment		speed monitoring control		US: NTCIP Transportation Sensors - SNMPv1/TLS		Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate
Traffic Management Center	ITS Roadway Equipment	speed monitoring control		US: NTCIP Transportation Sensors - SNMPv1/TLS		The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment	intersection control status		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Maint and Constr Management Center	roadway dynamic signage status		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Maint and Constr Management Center	speed monitoring information		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	environmental sensor data		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	right-of-way request notification		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	roadway dynamic signage status		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	roadway warning system status		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	signal control status		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	speed monitoring information		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	traffic detector data		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	traffic images		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.
ITS Roadway Equipment		Traffic Management Center	variable speed limit status		EU: UTMCI Data - UTMCI		The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Maint and Constr Management Center	ITS Roadway Equipment		roadway dynamic signage data		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Maint and Constr Management Center	ITS Roadway Equipment		speed monitoring control		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		environmental sensors control		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		roadway dynamic signage data		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		roadway warning system control		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		signal control commands		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		signal control device configuration		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		signal control plans		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		signal system configuration		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		speed monitoring control		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		traffic detector control		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		variable speed limit control		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
Traffic Management Center	ITS Roadway Equipment		video surveillance control		EU: UTMC Data - UTMC	The security provided by SNMPv2 does not provide certificate based authentication of users; it only checks the certificates of a connection when TLS is used, but data access is still dependent upon the user name. Use of SNMPv3 is strongly recommended.	
ITS Roadway Equipment	Maint and Constr Management Center	traffic images		US: NTCIP CCTV - SNMPv1/TLS		Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Maint and Constr Management Center	traffic images		US: NTCIP CCTV - SNMPv1/TLS		The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment	Traffic Management Center	traffic images		US: NTCIP CCTV - SNMPv1/TLS		Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Traffic Management Center	traffic images		US: NTCIP CCTV - SNMPv1/TLS		The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center	ITS Roadway Equipment		video surveillance control		US: NTCIP CCTV - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center	ITS Roadway Equipment		video surveillance control		US: NTCIP CCTV - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center	ITS Roadway Equipment			video surveillance control	US: NTCIP CCTV - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center	Maint and Constr Vehicle OBE			environmental sensors control	US: NTCIP Environmental Sensors - Mobile SNMPv1/TLS		
Maint and Constr Management Center	Maint and Constr Vehicle OBE			environmental sensors control	US: NTCIP Environmental Sensors - Mobile SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate security in checking the certificate to en	
Maint and Constr Vehicle OBE	Maint and Constr Management Center			environmental sensor data	US: NTCIP Environmental Sensors - Mobile SNMPv1/TLS		
Maint and Constr Vehicle OBE	Maint and Constr Management Center			environmental sensor data	US: NTCIP Environmental Sensors - Mobile SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate security in checking the certificate to en	
Emissions Management Center	ITS Roadway Equipment			air quality sensor control	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Emissions Management Center	ITS Roadway Equipment			air quality sensor control	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center	ITS Roadway Equipment			environmental sensors control	US: NTCIP Environmental Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment	Maint and Constr Management Center			field equipment status	US: NTCIP Generic Objects - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Maint and Constr Management Center			field equipment status	US: NTCIP Generic Objects - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment	Traffic Management Center			lighting system status	US: NTCIP Lighting - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Traffic Management Center			lighting system status	US: NTCIP Lighting - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center	ITS Roadway Equipment			lighting system control data	US: NTCIP Lighting - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center	ITS Roadway Equipment			lighting system control data	US: NTCIP Lighting - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment	Maint and Constr Management Center			roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Maint and Constr Management Center			roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment	Traffic Management Center			roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Traffic Management Center			roadway dynamic signage status	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment	Traffic Management Center			roadway warning system status	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment	Traffic Management Center			roadway warning system status	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		lane management control	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		lane management control	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	US: NTCIP Message Sign - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	US: NTCIP Message Sign - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	US: NTCIP Ramp Meters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		traffic metering status	US: NTCIP Ramp Meters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		traffic metering control	US: NTCIP Ramp Meters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		traffic metering control	US: NTCIP Ramp Meters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	US: NTCIP Signal Priority - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification	US: NTCIP Signal Priority - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration	US: NTCIP Signal System Masters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	US: NTCIP Signal System Masters - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		signal system configuration	US: NTCIP Signal System Masters - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		signal control status	US: NTCIP Traffic Signal - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		signal control status	US: NTCIP Traffic Signal - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		signal control plans	US: NTCIP Traffic Signal - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		signal control plans	US: NTCIP Traffic Signal - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Traffic Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Traffic Management Center		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Emergency Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Emergency Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Emergency Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Emergency Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	
Maint and Constr Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1/TLS	Application level authentication is not addressed by this communication profile. While it assumes encryption with certificates to exchange data between end devices, the application layer does not provide adequate authentication in checking the certificate	
Maint and Constr Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv1/TLS	The use of TLS with SNMPv1 has been deployed in the field, but the ITS community has not officially adopted it.	

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States	
Issue Description:	The standard allows for multiple security mechanisms. The only defined mechanism that meets the requirements for C-ITS is the one based on TLS.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Traffic Management Center	lane management information	(None-Data) - SNMPv3					
ITS Roadway Equipment	Traffic Management Center	lane violation notification	(None-Data) - SNMPv3					
ITS Roadway Equipment	Traffic Management Center	rail crossing blockage notification	(None-Data) - SNMPv3					
ITS Roadway Equipment	Traffic Management Center	rail crossing status	(None-Data) - SNMPv3					
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - SNMPv3					
ITS Roadway Equipment	Traffic Management Center	stop sign gap assist status	(None-Data) - SNMPv3					
ITS Roadway Payment Equipment	Connected Vehicle Roadside Equipment	payment instructions	(None-Data) - SNMPv3					
ITS Roadway Payment Equipment	Connected Vehicle Roadside Equipment	vehicle entries and exits	(None-Data) - SNMPv3					
Maint and Constr Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - SNMPv3					
Maint and Constr Management Center	Connected Vehicle Roadside Equipment	vehicle signage application info	(None-Data) - SNMPv3					
Maint and Constr Management Center	Connected Vehicle Roadside Equipment	work zone safety application info	(None-Data) - SNMPv3					
Maint and Constr Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - SNMPv3					
Map Update System	Connected Vehicle Roadside Equipment	map updates	(None-Data) - SNMPv3					
Map Update System	Connected Vehicle Roadside Equipment	parking facility geometry	(None-Data) - SNMPv3					
Other Connected Vehicle Roadside Equipment	Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - SNMPv3					
Other Parking Management Systems	Parking Management System	parking coordination	(None-Data) - SNMPv3					
Parking Management System	Connected Vehicle Roadside Equipment	parking management application info	(None-Data) - SNMPv3					
Parking Management System	Connected Vehicle Roadside Equipment	vehicle signage local data	(None-Data) - SNMPv3					
Parking Management System	Other Parking Management Systems	parking coordination	(None-Data) - SNMPv3					
Payment Administration Center	Connected Vehicle Roadside Equipment	road use charges	(None-Data) - SNMPv3					
Payment Administration Center	Connected Vehicle Roadside Equipment	toll collection application info	(None-Data) - SNMPv3					
Payment Administration Center	Connected Vehicle Roadside Equipment	vehicle payment request	(None-Data) - SNMPv3					
Payment Administration Center	ITS Roadway Payment Equipment	payment instructions	(None-Data) - SNMPv3					
Traffic Management Center	Connected Vehicle Roadside Equipment	automated lane control data	(None-Data) - SNMPv3					
Traffic Management Center	Connected Vehicle Roadside Equipment	infrastructure restriction warning info	(None-Data) - SNMPv3					
Traffic Management Center	Connected Vehicle Roadside Equipment	intersection management application info	(None-Data) - SNMPv3					
Traffic Management Center	Connected Vehicle Roadside Equipment	intersection safety application info	(None-Data) - SNMPv3					
ITS Roadway Equipment	Maint and Constr Vehicle OBE	roadway advisory radio status	(None-Data) - Mobile SNMPv3					
Maint and Constr Vehicle OBE	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - Mobile SNMPv3					
Personal Information Device	Service Monitor System	PID status	(None-Data) - Mobile SNMPv3					
Center	Connected Vehicle Roadside Equipment	RSE application information	(None-Data) - SNMPv3					
Center	Connected Vehicle Roadside Equipment	RSE application install/upgrade	(None-Data) - SNMPv3					
Center	Connected Vehicle Roadside Equipment	RSE control commands	(None-Data) - SNMPv3					
Center	Service Monitor System	system monitoring	(None-Data) - SNMPv3					

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Commercial Vehicle Administration Center	Connected Vehicle Roadside Equipment			trigger area notification	(None-Data) - SNMPv3		
Commercial Vehicle Administration Center	Connected Vehicle Roadside Equipment			trigger control	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Archived Data Center			local situation data	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Center			device identification	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Center			protected location and address flow	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Center			RSE application status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Commercial Vehicle Administration Center			on-board safety data	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Commercial Vehicle Administration Center			roadside data message	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Data Distribution System			local situation data	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Electric Charging Station			vehicle charging profile	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Emergency Management Center			work zone safety application status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Emissions Management Center			low emissions zone application status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE application install/upgrade	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE configuration settings	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE control commands	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			environmental situation data	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection infringement info	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			restricted lanes application status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			vehicle entries and exits	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			vehicle occupancy	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			work zone warning notification	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Payment Equipment			vehicle entries and exits	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			environmental situation data	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			reduced speed warning status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			vehicle signage application status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Maint and Constr Management Center			work zone safety application status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Map Update System			vehicle location data for mapping	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment			wrong way vehicle detected	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Parking Management System			connected vehicle parking data	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Payment Administration Center			access violation notification	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Payment Administration Center			road use history	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Payment Administration Center			toll collection application status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Payment Administration Center			vehicle payment information	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center			automated lane status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center			environmental situation data	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center			infrastructure restriction warning status	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center			intersection management application status	(None-Data) - SNMPv3		



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Traffic Management Center		intersection safety application status		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center		lighting management application status	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Traffic Management Center		local border wait times		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center		queue warning application status	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Traffic Management Center		rail crossing application status		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center		reduced speed warning status	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Traffic Management Center		restricted lanes application status		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center		speed management application status	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Traffic Management Center		stop sign gap assist RSE status		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center		traffic metering application status	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Traffic Management Center		traffic monitoring application status		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Traffic Management Center		vehicle signage application status	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Traffic Management Center		work zone application status		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Transit Management Center		transit user guidance application status	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Transportation Information Center		electric charging station information		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Transportation Information Center		environmental situation data	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Transportation Information Center		local situation data		(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment	Transportation Information Center		road weather advisory status	(None-Data) - SNMPv3			
Connected Vehicle Roadside Equipment	Transportation Information Center		traveler information application status		(None-Data) - SNMPv3		
Data Distribution System	Connected Vehicle Roadside Equipment		local traveler information distribution data	(None-Data) - SNMPv3			
Data Distribution System	Connected Vehicle Roadside Equipment		situation data collection parameters		(None-Data) - SNMPv3		
DMV	ITS Roadway Equipment		registration	(None-Data) - SNMPv3			
Electric Charging Station	Connected Vehicle Roadside Equipment		current charging status		(None-Data) - SNMPv3		
Emergency Management Center	Connected Vehicle Roadside Equipment		emergency acknowledge	(None-Data) - SNMPv3			
Emergency Management Center	Connected Vehicle Roadside Equipment		work zone safety application info		(None-Data) - SNMPv3		
Emissions Management Center	Connected Vehicle Roadside Equipment		low emissions zone application info	(None-Data) - SNMPv3			
Emissions Management Center	Connected Vehicle Roadside Equipment		vehicle emissions monitoring parameters		(None-Data) - SNMPv3		
Emissions Management Center	ITS Roadway Equipment		emissions sensor control	(None-Data) - SNMPv3			
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE application install/upgrade		(None-Data) - SNMPv3		
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE configuration settings	(None-Data) - SNMPv3			
Field Support Equipment	Connected Vehicle Roadside Equipment		RSE control commands		(None-Data) - SNMPv3		
Field Support Equipment	ITS Roadway Equipment		field equipment software install/upgrade	(None-Data) - SNMPv3			
ITS Roadway Equipment	Center		device identification		(None-Data) - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		infrastructure restriction warning	(None-Data) - SNMPv3			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		reduced speed warning info		(None-Data) - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		traffic gap information	(None-Data) - SNMPv3			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		vehicle entries and exits		(None-Data) - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - SNMPv3			

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		work zone warning notification	(None-Data) - SNMPv3		
ITS Roadway Equipment		Emissions Management Center		vehicle emissions data	(None-Data) - SNMPv3		
ITS Roadway Equipment		Maint and Constr Management Center		roadway advisory radio status	(None-Data) - SNMPv3		
ITS Roadway Equipment		Traffic Management Center		infrastructure restriction warning status	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		lighting management application info	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		queue warning application information	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		rail crossing application info	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		reduced speed warning info	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		restricted lanes application info	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		situation data collection parameters	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		speed management application information	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		stop sign gap assist info	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic metering application info	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		traffic monitoring application info	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - SNMPv3		
Traffic Management Center		Connected Vehicle Roadside Equipment		work zone application info	(None-Data) - SNMPv3		
Traffic Management Center		ITS Roadway Equipment		infrastructure restriction warning control	(None-Data) - SNMPv3		
Traffic Management Center		ITS Roadway Equipment		rail crossing control data	(None-Data) - SNMPv3		
Traffic Management Center		ITS Roadway Equipment		rail crossing request	(None-Data) - SNMPv3		
Traffic Management Center		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - SNMPv3		
Traffic Management Center		ITS Roadway Equipment		stop sign gap assist control	(None-Data) - SNMPv3		
Transit Management Center		Connected Vehicle Roadside Equipment		transit user guidance application info	(None-Data) - SNMPv3		
Transportation Information Center		Connected Vehicle Roadside Equipment		electric charging services inventory	(None-Data) - SNMPv3		
Transportation Information Center		Connected Vehicle Roadside Equipment		road weather advisory info	(None-Data) - SNMPv3		
Transportation Information Center		Connected Vehicle Roadside Equipment		traveler information application info	(None-Data) - SNMPv3		
Tunnel Management System		Connected Vehicle Roadside Equipment		vehicle signage application info	(None-Data) - SNMPv3		
Connected Vehicle Roadside Equipment		ITS Roadway Payment Equipment		payment transactions	(Out of Scope) - SNMPv3		
Connected Vehicle Roadside Equipment		Payment Administration Center		service payment information	(Out of Scope) - SNMPv3		
ITS Roadway Payment Equipment		Payment Administration Center		payment transactions	(Out of Scope) - SNMPv3		
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing blockage notification	F-F: Highway-Rail Field Interface - SNMPv3		
Connected Vehicle Roadside Equipment		Wayside Equipment		rail crossing operational status	F-F: Highway-Rail Field Interface - SNMPv3		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		track status	F-F: Highway-Rail Field Interface - SNMPv3		
ITS Roadway Equipment		Wayside Equipment		rail crossing blockage notification	F-F: Highway-Rail Field Interface - SNMPv3		
ITS Roadway Equipment		Wayside Equipment		rail crossing operational status	F-F: Highway-Rail Field Interface - SNMPv3		
Multi-Modal Crossing		Connected Vehicle Roadside Equipment		multimodal crossing status	F-F: Highway-Rail Field Interface - SNMPv3		
Multi-Modal Crossing		ITS Roadway Equipment		multimodal crossing status	F-F: Highway-Rail Field Interface - SNMPv3		
Wayside Equipment		Connected Vehicle Roadside Equipment		track status	F-F: Highway-Rail Field Interface - SNMPv3		
Wayside Equipment		ITS Roadway Equipment		track status	F-F: Highway-Rail Field Interface - SNMPv3		

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Data Distribution System		data provision		Flow-Specific Data - SNMPv3		
Connected Vehicle Roadside Equipment	Data Distribution System	data query		Flow-Specific Data - SNMPv3			
Connected Vehicle Roadside Equipment	Data Distribution System		data subscription		Flow-Specific Data - SNMPv3		
Data Distribution System	Connected Vehicle Roadside Equipment	data publication		Flow-Specific Data - SNMPv3			
Data Distribution System	Connected Vehicle Roadside Equipment		data query publication		Flow-Specific Data - SNMPv3		
ITS Roadway Payment Equipment	Traffic Management Center	incident report		US: Incident Management - SNMPv3			
ITS Roadway Equipment	Maint and Constr Vehicle OBE		traffic images		US: NTCIP CCTV - Mobile SNMPv3		
Maint and Constr Vehicle OBE	ITS Roadway Equipment	video surveillance control		US: NTCIP CCTV - Mobile SNMPv3			
ITS Roadway Equipment	Maint and Constr Management Center		traffic images		US: NTCIP CCTV - SNMPv3		
ITS Roadway Equipment	Traffic Management Center	traffic images		US: NTCIP CCTV - SNMPv3			
Maint and Constr Management Center	ITS Roadway Equipment		video surveillance control		US: NTCIP CCTV - SNMPv3		
Traffic Management Center	ITS Roadway Equipment	video surveillance control		US: NTCIP CCTV - SNMPv3			
Maint and Constr Management Center	Maint and Constr Vehicle OBE		environmental sensors control		US: NTCIP Environmental Sensors - Mobile SNMPv3		
Maint and Constr Management Center	Maint and Constr Vehicle OBE	maint and constr vehicle system control		US: NTCIP Environmental Sensors - Mobile SNMPv3			
Maint and Constr Vehicle OBE	Maint and Constr Management Center		environmental sensor data		US: NTCIP Environmental Sensors - Mobile SNMPv3		
Maint and Constr Vehicle OBE	Maint and Constr Management Center	maint and constr vehicle operational data		US: NTCIP Environmental Sensors - Mobile SNMPv3			
Connected Vehicle Roadside Equipment	Emissions Management Center		emissions situation data		US: NTCIP Environmental Sensors - SNMPv3		
Emissions Management Center	ITS Roadway Equipment	air quality sensor control		US: NTCIP Environmental Sensors - SNMPv3			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		environmental sensor data		US: NTCIP Environmental Sensors - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	ITS roadway equipment information		US: NTCIP Environmental Sensors - SNMPv3			
ITS Roadway Equipment	Emissions Management Center		air quality sensor data		US: NTCIP Environmental Sensors - SNMPv3		
ITS Roadway Equipment	Maint and Constr Management Center	environmental sensor data		US: NTCIP Environmental Sensors - SNMPv3			
ITS Roadway Equipment	Traffic Management Center		environmental sensor data		US: NTCIP Environmental Sensors - SNMPv3		
Maint and Constr Management Center	ITS Roadway Equipment	environmental sensors control		US: NTCIP Environmental Sensors - SNMPv3			
Traffic Management Center	ITS Roadway Equipment		environmental sensors control		US: NTCIP Environmental Sensors - SNMPv3		
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE status		US: NTCIP Generic Objects - SNMPv3			
Connected Vehicle Roadside Equipment	Service Monitor System		RSE status		US: NTCIP Generic Objects - SNMPv3		
Field Support Equipment	Connected Vehicle Roadside Equipment	RSE status		US: NTCIP Generic Objects - SNMPv3			
Field Support Equipment	ITS Roadway Equipment		field equipment commands		US: NTCIP Generic Objects - SNMPv3		
Field Support Equipment	ITS Roadway Equipment	field equipment configuration settings		US: NTCIP Generic Objects - SNMPv3			
ITS Roadway Equipment	Field Support Equipment		field equipment status		US: NTCIP Generic Objects - SNMPv3		
ITS Roadway Equipment	Maint and Constr Management Center	field device status		US: NTCIP Generic Objects - SNMPv3			
ITS Roadway Equipment	Maint and Constr Management Center		field equipment status		US: NTCIP Generic Objects - SNMPv3		
ITS Roadway Equipment	Traffic Management Center	lighting system status		US: NTCIP Lighting - SNMPv3			
Traffic Management Center	ITS Roadway Equipment		lighting system control data		US: NTCIP Lighting - SNMPv3		
ITS Roadway Equipment	Maint and Constr Vehicle OBE	roadway dynamic signage status		US: NTCIP Message Sign - Mobile SNMPv3			

Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
Maint and Constr Vehicle OBE	ITS Roadway Equipment		roadway dynamic signage data		US: NTCIP Message Sign - Mobile SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		roadway dynamic signage data		US: NTCIP Message Sign - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		ITS roadway equipment information		US: NTCIP Message Sign - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		roadway dynamic signage status		US: NTCIP Message Sign - SNMPv3		
ITS Roadway Equipment	Maint and Constr Management Center		roadway dynamic signage status		US: NTCIP Message Sign - SNMPv3		
ITS Roadway Equipment	Other ITS Roadway Equipment		dynamic sign coordination		US: NTCIP Message Sign - SNMPv3		
ITS Roadway Equipment	Traffic Management Center		roadway dynamic signage status		US: NTCIP Message Sign - SNMPv3		
ITS Roadway Equipment	Traffic Management Center		roadway warning system status		US: NTCIP Message Sign - SNMPv3		
ITS Roadway Equipment	Traffic Management Center		variable speed limit status		US: NTCIP Message Sign - SNMPv3		
Maint and Constr Management Center	ITS Roadway Equipment		roadway dynamic signage data		US: NTCIP Message Sign - SNMPv3		
Other ITS Roadway Equipment	ITS Roadway Equipment		dynamic sign coordination		US: NTCIP Message Sign - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		lane management control		US: NTCIP Message Sign - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		roadway dynamic signage data		US: NTCIP Message Sign - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		roadway warning system control		US: NTCIP Message Sign - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		variable speed limit control		US: NTCIP Message Sign - SNMPv3		
ITS Roadway Equipment	Traffic Management Center		traffic metering status		US: NTCIP Ramp Meters - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		traffic metering control		US: NTCIP Ramp Meters - SNMPv3		
ITS Roadway Equipment	Traffic Management Center		pedestrian safety warning status		US: NTCIP Traffic Signal - SNMPv3		
ITS Roadway Equipment	Traffic Management Center		signal control status		US: NTCIP Traffic Signal - SNMPv3		
Other ITS Roadway Equipment	ITS Roadway Equipment		signal control coordination		US: NTCIP Traffic Signal - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		signal preemption request		US: NTCIP Signal Priority - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		signal priority service request		US: NTCIP Signal Priority - SNMPv3		
ITS Roadway Equipment	Traffic Management Center		right-of-way request notification		US: NTCIP Signal Priority - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		signal control commands		US: NTCIP Signal System Masters - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		signal control device configuration		US: NTCIP Signal System Masters - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		signal system configuration		US: NTCIP Signal System Masters - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		pedestrian location information		US: NTCIP Traffic Signal - SNMPv3		
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		signal service request		US: NTCIP Traffic Signal - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		conflict monitor status		US: NTCIP Traffic Signal - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		intersection control status		US: NTCIP Traffic Signal - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		ITS roadway equipment information		US: NTCIP Traffic Signal - SNMPv3		
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		pedestrian crossing status		US: NTCIP Traffic Signal - SNMPv3		
ITS Roadway Equipment	Other ITS Roadway Equipment		signal control coordination		US: NTCIP Traffic Signal - SNMPv3		
ITS Roadway Equipment	Other ITS Roadway Equipment		signal control data		US: NTCIP Traffic Signal - SNMPv3		
Other ITS Roadway Equipment	ITS Roadway Equipment		signal control data		US: NTCIP Traffic Signal - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		pedestrian safety warning control		US: NTCIP Traffic Signal - SNMPv3		
Traffic Management Center	ITS Roadway Equipment		signal control plans		US: NTCIP Traffic Signal - SNMPv3		



Class	Security	Timeframe	Urgent	Proposed Resolution	I-F: Secure communications	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic detector data	US: NTCIP Transportation Sensors - Mobile SNMPv3		
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - Mobile SNMPv3		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		traffic situation data	US: NTCIP Transportation Sensors - SNMPv3		
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	US: NTCIP Transportation Sensors - SNMPv3		
Connected Vehicle Roadside Equipment		Transportation Information Center		traffic situation data	US: NTCIP Transportation Sensors - SNMPv3		
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv3		
ITS Roadway Equipment		Maint and Constr Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv3		
ITS Roadway Equipment		Other ITS Roadway Equipment		roadway detector coordination	US: NTCIP Transportation Sensors - SNMPv3		
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	US: NTCIP Transportation Sensors - SNMPv3		
ITS Roadway Equipment		Traffic Management Center		traffic detector data	US: NTCIP Transportation Sensors - SNMPv3		
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	US: NTCIP Transportation Sensors - SNMPv3		
Maint and Constr Management Center		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - SNMPv3		
Other ITS Roadway Equipment		ITS Roadway Equipment		roadway detector coordination	US: NTCIP Transportation Sensors - SNMPv3		
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	US: NTCIP Transportation Sensors - SNMPv3		
Traffic Management Center		ITS Roadway Equipment		traffic detector control	US: NTCIP Transportation Sensors - SNMPv3		
Emergency Management Center		Emergency Vehicle OBE		work zone warning device control	US: NTCIP Warning Device - Mobile SNMPv3		
Emergency Vehicle OBE		Emergency Management Center		work zone warning status	US: NTCIP Warning Device - Mobile SNMPv3		
Maint and Constr Management Center		Maint and Constr Vehicle OBE		work zone warning device control	US: NTCIP Warning Device - Mobile SNMPv3		
Emergency Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv3		
ITS Roadway Equipment		Emergency Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv3		
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv3		
Maint and Constr Management Center		ITS Roadway Equipment		work zone warning device control	US: NTCIP Warning Device - SNMPv3		
Maint and Constr Vehicle OBE		Maint and Constr Management Center		work zone warning status	US: NTCIP Warning Device - SNMPv3		
Connected Vehicle Roadside Equipment		Commercial Vehicle Administration Center		driver log	US: SAE J3067 (J2735 SE) - SNMPv3		
Connected Vehicle Roadside Equipment		Emergency Management Center		emergency notification	US: SAE J3067 (J2735 SE) - SNMPv3		
Connected Vehicle Roadside Equipment		Emergency Management Center		emergency notification relay	US: SAE J3067 (J2735 SE) - SNMPv3		
Connected Vehicle Roadside Equipment		Parking Management System		commercial vehicle identification	US: SAE J3067 (J2735 SE) - SNMPv3		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		arriving train information	US: SAE Other J2735 - SNMPv3		
Map Update System		Connected Vehicle Roadside Equipment		intersection geometry	US: SAE Other J2735 - SNMPv3		
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information	US: SAE Other J2735 - SNMPv3		
Wayside Equipment		ITS Roadway Equipment		arriving train information	US: SAE Other J2735 - SNMPv3		
Map Update System		Connected Vehicle Roadside Equipment		intersection geometry	US: SAE Signal Control Messages - SNMPv3		
Map Update System		Connected Vehicle Roadside Equipment		roadway geometry	US: SAE Signal Control Messages - SNMPv3		
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic images	US: TMDD - Mobile SNMPv3		

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Security	Urgent	Misbehavior detection and security revocation mechanism	Conduct a field test to prove out the trust revocation mechanisms at all levels, including revoking the privileges of a certificate authority (e.g., if an authority is no longer recognized within a region) and of an ITS station (e.g., in case an ITS station starts to misbehave).				Australia, European Union, United States	
Issue Description:	The mechanisms used to prevent bad actors from sending authorized messages is unproven.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName	Notes			
Connected Vehicle Roadside Equipment		Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.			
Personal Information Device		Vehicle OBE	personal location	(None-Data) - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.			
Vehicle OBE		Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.			
Vehicle OBE		Other Vehicle OBEs	intersection infringement info	(None-Data) - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.			
Vehicle OBE		Other Vehicle OBEs	vehicle road information	(None-Data) - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.			
Connected Vehicle Roadside Equipment		Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.			
Connected Vehicle Roadside Equipment		Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).			
Connected Vehicle Roadside Equipment		Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.			
Connected Vehicle Roadside Equipment		Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			
Connected Vehicle Roadside Equipment		Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.			
Personal Information Device		Social Media	traveler request	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Personal Information Device		Social Media	traveler sourced updates	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Personal Information Device		Transportation Information Center	travel services request	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Transportation Information Center		Personal Information Device	travel services information	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Transportation Information Center		Vehicle OBE	travel services information	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Transportation Information Center		Vehicle OBE	traffic-related regulations	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Transportation Information Center		Vehicle OBE	trip plan	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Vehicle OBE		Center	device identification	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Vehicle OBE		Data Distribution System	traveler sourced updates	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Vehicle OBE		Payment Administration Center	road use history	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Vehicle OBE		Transportation Information Center	trip request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Vehicle OBE		Transportation Information Center	user profile	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Cooperative ITS Credentials Management System		Object Registration and Discovery Service	security credentials	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Cooperative ITS Credentials Management System		Object Registration and Discovery Service	security policy and networking information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Cooperative ITS Credentials Management System		Other CCMS	authorization coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.			
Connected Vehicle Roadside Equipment		Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.			

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Personal Information Device			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Personal Information Device			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Personal Information Device			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Personal Information Device			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other CCMS	Cooperative ITS Credentials Management System			authorization coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other CCMS	Cooperative ITS Credentials Management System			enrollment coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other CCMS	Cooperative ITS Credentials Management System			misbehavior analysis coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other CCMS	Cooperative ITS Credentials Management System			revocation coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	Connected Vehicle Roadside Equipment			road use charges	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	Connected Vehicle Roadside Equipment			vehicle payment request	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	DMV			license request	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	Emissions Management Center			low emissions zone coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	Enforcement Center			payment violation notification	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	Parking Management System			vehicle payment request	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	Public Information Device			traveler payment request	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	Public Information Device			user account reports	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Privacy Protection Gateway	Center			protected location and address flow	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Privacy Protection Gateway	Cooperative ITS Credentials Management System			protected location and address flow	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device			pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			traffic gap information	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Personal Information Device	Connected Vehicle Roadside Equipment			personal location	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Personal Information Device	Vehicle OBE			personal location	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs			vehicle road information	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs			vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device			pedestrian safety information	(None-Data) - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			traffic gap information	(None-Data) - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment request	(None-Data) - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			intersection infringement info	(None-Data) - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Personal Information Device	Connected Vehicle Roadside Equipment			personal location	(None-Data) - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs			vehicle travel time data	(None-Data) - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Alternate Mode Transportation Center	Transportation Information Center			alternate mode incident information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Alternate Mode Transportation Center	Transportation Information Center			alternate mode information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Alternate Mode Transportation Center	Transportation Information Center			alternate mode service demand info	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Alternate Mode Transportation Center	Transportation Information Center			service request	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Authorizing Center	Center			permission request received	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Authorizing Center	Cooperative ITS Credentials Management System			user permission sets	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Authorizing Center	Other Authorizing Centers			permission request coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Center	Authorizing Center			permission request	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Center	Authorizing Center			permission update request	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Center	Connected Vehicle Roadside Equipment			RSE application install/upgrade	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Center	Cooperative ITS Credentials Management System			device enrollment information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Center	Cooperative ITS Credentials Management System			misbehavior report	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Center			protected location and address flow	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Cooperative ITS Credentials Management System			device enrollment information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Cooperative ITS Credentials Management System			misbehavior report	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Cooperative ITS Credentials Management System			protected location and address flow	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Field Support Equipment			RSE application install/upgrade	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Payment Administration Center			access violation notification	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Payment Administration Center			road use history	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Center			security credential revocations	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Center			security credentials	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Center			security policy and networking information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Connected Vehicle Roadside Equipment			security credential revocations	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Connected Vehicle Roadside Equipment			security credentials	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Cooperative ITS Credentials Management System	Connected Vehicle Roadside Equipment			security policy and networking information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Data Distribution System			security credential revocations	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Data Distribution System			security credentials	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Data Distribution System			security policy and networking information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Object Registration and Discovery Service			security credential revocations	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Other CCMS			enrollment coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Other CCMS			misbehavior analysis coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Other CCMS			revocation coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Service Monitor System			security credential revocations	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Service Monitor System			security credentials	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Service Monitor System			security policy and networking information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Wide Area Information Disseminator			security credential revocations	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Wide Area Information Disseminator			security credentials	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Wide Area Information Disseminator			security policy and networking information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Cooperative ITS Credentials Management System			device enrollment information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Cooperative ITS Credentials Management System			misbehavior report	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Service Monitor System			support system status	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
DMV	Payment Administration Center			registration	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emissions Management Center	Payment Administration Center			low emissions zone coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emissions Management Center	Payment Administration Center			low emissions zone operations information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Field Support Equipment	Connected Vehicle Roadside Equipment			RSE application install/upgrade	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Map Update System	Public Information Device			map updates	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Object Registration and Discovery Service	Cooperative ITS Credentials Management System			device enrollment information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Object Registration and Discovery Service	Cooperative ITS Credentials Management System			misbehavior report	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Authorizing Centers	Authorizing Center			permission request coordination	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Payment Administration Center			user account setup	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Transit Management Center			transit information user request	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Service Monitor System		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Service Monitor System		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System		Personal Information Device		security credential revocations	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System		Personal Information Device		security credentials	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System		Personal Information Device		security policy and networking information	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System		Vehicle OBE		security credential revocations	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System		Vehicle OBE		security credentials	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System		Vehicle OBE		security policy and networking information	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Management Center		Emergency Vehicle OBE		occupant information	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Payment Administration Center		vehicle payment request	(None-Data) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Care Facility		Emergency Vehicle OBE		care facility status	(None-Data) - Guaranteed Mobile Internet (X.509)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Care Facility		Emergency Vehicle OBE		medical records	(None-Data) - Guaranteed Mobile Internet (X.509)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Management Center		Emergency Vehicle OBE		green wave information	(None-Data) - Guaranteed Mobile Internet (X.509)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE		Care Facility		care facility status request	(None-Data) - Guaranteed Mobile Internet (X.509)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE		Care Facility		medical records request	(None-Data) - Guaranteed Mobile Internet (X.509)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Object Registration and Discovery Service		Personal Information Device		object discovery	(None-Data) - Guaranteed Mobile Internet (X.509)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Object Registration and Discovery Service		Vehicle OBE		object discovery	(None-Data) - Guaranteed Mobile Internet (X.509)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Border Inspection System		Commercial Vehicle Check Equipment		inspection results	(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Border Inspection System		Connected Vehicle Roadside Equipment		border pass/pull-in	(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Border Inspection System		Connected Vehicle Roadside Equipment		clearance notification	(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Border Inspection System		Connected Vehicle Roadside Equipment		traveler border clearance status	(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Border Inspection System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle Check Equipment		Connected Vehicle Roadside Equipment		border pass/pull-in	(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle Check Equipment		Connected Vehicle Roadside Equipment		electronic screening request	(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Commercial Vehicle Check Equipment	Connected Vehicle Roadside Equipment		pass/pull-in		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle Check Equipment	Connected Vehicle Roadside Equipment	screening event record		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Border Inspection System		container manifest		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Border Inspection System	container seal status		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Border Inspection System		local border wait times		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Border Inspection System	tag data		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Border Inspection System		traveler credentials		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Check Equipment	border clearance data		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Check Equipment		electronic lock data		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Check Equipment	on-board safety data		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Check Equipment		screening event record		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Check Equipment	tag data		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle Check Equipment		unique identifiers		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Traffic Management Center	local border wait times		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Wide Area Information Disseminator		security credential revocations		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Wide Area Information Disseminator	security credentials		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Cooperative ITS Credentials Management System	Wide Area Information Disseminator		security policy and networking information		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Map Update System	Center	map updates		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Object Registration and Discovery Service	Wide Area Information Disseminator		object discovery		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Service Monitor System	Wide Area Information Disseminator	service maintenance status		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Wide Area Information Disseminator		traffic-related regulations		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wide Area Information Disseminator	Cooperative ITS Credentials Management System	device enrollment information		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wide Area Information Disseminator	Cooperative ITS Credentials Management System	misbehavior report		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wide Area Information Disseminator	Object Registration and Discovery Service	object registration		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wide Area Information Disseminator	Service Monitor System		service maintenance request		(None-Data) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wide Area Information Disseminator	Service Monitor System	support system status		(None-Data) - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device		location correction		(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Personal Information Device	location correction		(None-Data) - Local Broadcast Wireless (AU/EU)		The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Personal Information Device		location correction		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Personal Information Device	location correction		(None-Data) - Local Broadcast Wireless (AU/EU)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE		arriving train information		(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE	arriving train information		(None-Data) - Local Broadcast Wireless (AU/EU)		Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE		arriving train information		(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			screening event record	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			trigger area notification	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Freight Equipment			container identification request	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Freight Equipment			container seal interrogation	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			cooperative adaptive cruise control parameters	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			electric charging services inventory	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			emergency acknowledge	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			infrastructure restriction warning notification	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			low emissions zone parameters	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Other Vehicle OBEs	Vehicle OBE		vehicle travel time data		(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE		vehicle travel time data		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs	Vehicle OBE		vehicle travel time data		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Personal Information Device	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Personal Information Device	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Personal Information Device	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Personal Information Device	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Personal Information Device	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display conflict warning		(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display conflict warning		(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display conflict warning		(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display conflict warning		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display conflict warning		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display snapshots		(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display snapshots		(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display snapshots		(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display snapshots		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment		driver display snapshots		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment		private location and address flow		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment		service response		(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment		service response		(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment		service response		(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment		service response		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment		service response		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle profile		(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle profile		(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle profile		(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle profile		(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Payment Administration Center		vehicle payment request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Privacy Protection Gateway		private location and address flow	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Service Monitor System		OBE status	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transportation Information Center		emergency traveler information request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transportation Information Center		evacuation assistance request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transportation Information Center		shelter request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transportation Information Center		traveler sourced updates	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transportation Information Center		trip confirmation	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transportation Information Center		trip feedback	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Payment Administration Center		service payment information	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transportation Information Center		travel services request	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Weather Service		Vehicle OBE		weather information	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		border clearance data	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		container transfer location request	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		electronic lock data	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		on-board safety data	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		screening event record	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		tag data	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		unique identifiers	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		border clearance data request	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		border clearance event	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		border pass/pull-in	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		clearance notification	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		container transfer location	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		electronic lock data request	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		electronic screening request	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		pass/pull-in	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		request tag data	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		parking facility geometry	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		queue warning information	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			restricted lane warning	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			restricted lanes parameters	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road use charges	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			traveler border clearance status	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Freight Equipment			container seal interrogation	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs	Vehicle OBE			emergency acknowledge	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			cooperative adaptive cruise control status	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			road use history	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Other Vehicle OBEs			emergency acknowledge	(None-Data) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Intermodal Terminal			container transfer location request	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			access violation notification	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment	Connected Vehicle Roadside Equipment			container manifest	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment	Connected Vehicle Roadside Equipment			container seal status	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment	Connected Vehicle Roadside Equipment			tag data	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment	Emergency Vehicle OBE			container manifest	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment	Emergency Vehicle OBE			container seal status	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Intermodal Terminal	Commercial Vehicle OBE			container transfer location	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Intermodal Terminal	Freight Equipment			container identification request	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Connected Vehicle Roadside Equipment			private location and address flow	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Connected Vehicle Roadside Equipment			transit user information	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Transit Vehicle OBE			transfer request	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Transit Vehicle OBE			transit user information	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE	Personal Information Device			transfer status	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			private location and address flow	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			service response	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			traveler credentials	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle payment information	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle route plan	(None-Data) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Center	Personal Information Device			permission application receipt	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle Administration Center	Commercial Vehicle OBE			safety inspection record	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Commercial Vehicle Administration Center			on-board safety data	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Commercial Vehicle Administration Center			unique identifiers	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Commercial Vehicle OBE Service Provider			on-board vehicle data	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Fleet and Freight Management Center			on-board safety data	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Fleet and Freight Management Center			on-board vehicle data	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Fleet and Freight Management Center			route deviation alert	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Commercial Vehicle OBE		Transportation Information Center		freight traveler information preferences	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Emergency Management Center	Emergency Vehicle OBE			emergency dispatch requests	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Emergency Management Center	Vehicle OBE			emergency acknowledge	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Emergency Vehicle OBE	Emergency Management Center			emergency dispatch response	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Enforcement Center	Commercial Vehicle OBE			commercial vehicle violation notification	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Enforcement Center	Vehicle OBE			service notification record	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Fleet and Freight Management Center	Commercial Vehicle OBE			route deviation alert	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Fleet and Freight Management Center	Commercial Vehicle OBE			safety inspection record	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Fleet and Freight Management Center	Commercial Vehicle OBE			transport assignment	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Fleet and Freight Management Center	Commercial Vehicle OBE			trigger area	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Fleet and Freight Management Center	Commercial Vehicle OBE			trigger area notification	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Fleet and Freight Management Center	Freight Equipment			freight monitoring parameters	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Management Center	Maint and Constr Vehicle OBE			maint and constr dispatch information	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Management Center	Vehicle OBE			roadway maintenance status	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Vehicle OBE	Maint and Constr Management Center			infrastructure conditions data	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Vehicle OBE	Maint and Constr Management Center			maint and constr dispatch status	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Vehicle OBE	Maint and Constr Management Center			work zone status	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Map Update System	Personal Information Device			map updates	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Map Update System	Vehicle OBE			map updates	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Map Update System	Vehicle OBE			parking facility geometry	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Payment Administration Center	Personal Information Device			access violation notification	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Payment Administration Center	Personal Information Device			traveler payment request	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Payment Administration Center	Personal Information Device			user account reports	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Payment Administration Center	Vehicle OBE			access violation notification	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Payment Administration Center	Vehicle OBE			road use charges	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Payment Administration Center	Vehicle OBE			vehicle payment request	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Center			device identification	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Center			permission application	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Data Distribution System			traveler sourced updates	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Payment Administration Center			user account setup	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Privacy Protection Gateway			private location and address flow	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Service Monitor System			PID status	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Transit Management Center			transfer request	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Transit Management Center			transit information user request	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Transit Management Center			trip confirmation	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Transit Management Center			trip request	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Transportation Information Center			emergency traveler information request	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Transportation Information Center			evacuation assistance request	(None-Data) - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Personal Information Device		Transportation Information Center		freight traveler information preferences	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Transportation Information Center		shelter request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Transportation Information Center		traveler sourced updates	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Transportation Information Center		trip confirmation	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Transportation Information Center		trip feedback	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Transportation Information Center		trip request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Transportation Information Center		user account setup	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Transportation Information Center		user profile	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center		Vehicle OBE		automated lane control data	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center		Vehicle OBE		restricted lane warning	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center		Vehicle OBE		restricted lanes application info	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center		Vehicle OBE		restricted lanes parameters	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center		Personal Information Device		transfer status	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center		Personal Information Device		trip plan	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center		Transit Vehicle OBE		transfer status	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center		Transit Vehicle OBE		transit stop locations	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE		Transit Management Center		transfer request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE		Transit Management Center		transit traveler request	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE		Transit Management Center		transit user information	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Commercial Vehicle OBE		freight-specific traveler information	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Personal Information Device		emergency traveler information	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Personal Information Device		evacuation assistance information	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Personal Information Device		freight-specific traveler information	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Personal Information Device		shelter recommendations	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Personal Information Device		traffic-related regulations	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Personal Information Device		trip plan	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Personal Information Device		user profile	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Vehicle OBE		electric charging services inventory	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Vehicle OBE		evacuation assistance information	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Vehicle OBE		shelter recommendations	(None-Data) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		traffic gap information	(None-Data) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		wrong way vehicle detected	(None-Data) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle platoon coordination	(None-Data) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle platoon coordination	(None-Data) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	(None-Data) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Other Vehicle OBEs		vehicle platoon coordination	(None-Data) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment request	(Out of Scope) - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Payment Administration	Payment Administration Center			payment coordination	(Out of Scope) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Parking Management System	Payment Administration Center			service payment information	(Out of Scope) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Payment Administration Center	Other Payment Administration			payment coordination	(Out of Scope) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Payment Administration Center			traveler payment information	(Out of Scope) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Transportation Information Center			travel services request	(Out of Scope) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Public Information Device			travel services information	(Out of Scope) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Payment Administration Center	Personal Information Device			service payment information	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Payment Administration Center			service payment information	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Payment Administration Center			traveler payment information	(Out of Scope) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			service advertisement	[Null] - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	AU TRAFF - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	AU TRAFF - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Data Distribution System	Personal Information Device			data publication	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Personal Information Device			data query publication	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Vehicle OBE			data publication	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Vehicle OBE			data query publication	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Data Distribution System			data provision	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Transportation Information Center			traveler request	US: ATIS - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Personal Information Device			interactive traveler information	US: ATIS - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Vehicle OBE			interactive traveler information	US: ATIS - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Data Distribution System			traveler request	US: ATIS - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Transportation Information Center			traveler request	US: ATIS - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Maint and Constr Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle control event	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle ID	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs			vehicle location and motion	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Personal Information Device		vehicle location and motion	EU: CA Service - FNTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Commercial Vehicle OBE	Fleet and Freight Management Center			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Commercial Vehicle OBE		Fleet and Freight Management Center		vehicle environmental data	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection safety warning	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		queue warning information	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle collision warning	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		wrong way vehicle detected	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Emergency Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		intersection infringement info	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle collision warning	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle control event	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle environmental data	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		vehicle hazard event	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs		Vehicle OBE		wrong way vehicle detected	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Transit Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		intersection infringement info	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle control event	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Vehicle OBE	Other Vehicle OBEs		intersection infringement info		EU: DEN Service - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs		vehicle collision warning		EU: DEN Service - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs		vehicle control event		EU: DEN Service - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs		vehicle hazard event		EU: DEN Service - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs		wrong way vehicle detected		EU: DEN Service - FNTF/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE		lane closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE		lane closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE		lane closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE		lane closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE		lane closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE		queue warning information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE		queue warning information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE		queue warning information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE		queue warning information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE		queue warning information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE		reduced speed notification		EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE		reduced speed notification		EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE		reduced speed notification		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE		reduced speed notification		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE		reduced speed notification		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE		road closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE		road closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE		road closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE		road closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Maint and Constr Vehicle OBE			environmental sensor data	US: NTCIP Environmental Sensors - WAVE SNMPv3	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	Connected Vehicle Roadside Equipment			environmental sensor data	US: NTCIP Environmental Sensors - WAVE SNMPv3	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Other Vehicle OBEs			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Other Vehicle OBEs			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Other Vehicle OBEs			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Other Vehicle OBEs			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	EU: Signal Control Messages - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	EU: Signal Control Messages - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	EU: Signal Control Messages - FNTTP/M5	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Personal Information Device			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Personal Information Device			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Personal Information Device			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Personal Information Device			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Wayside Equipment			rail crossing blockage notification	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			arriving train information	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
ITS Roadway Equipment	Connected Vehicle Roadside Equipment			track status	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
ITS Roadway Equipment	Wayside Equipment			rail crossing blockage notification	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Multi-Modal Crossing	Connected Vehicle Roadside Equipment			multimodal crossing status	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Multi-Modal Crossing	ITS Roadway Equipment			multimodal crossing status	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wayside Equipment		Connected Vehicle Roadside Equipment		track status	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wayside Equipment		ITS Roadway Equipment		arriving train information	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Wayside Equipment		ITS Roadway Equipment		track status	F-F: Highway-Rail Field Interface - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Data Distribution System		data query	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device		Data Distribution System		data subscription	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Data Distribution System		data provision	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Data Distribution System		data query	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Data Distribution System		data subscription	Flow-Specific Data - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Management Center		Emergency Vehicle OBE		decision support information	US: Incident Management - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE		Emergency Management Center		incident status	US: Incident Management - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Fleet and Freight Management Center		Commercial Vehicle OBE		hazmat information	US: Incident Management - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transportation Information Center		vehicle environmental data	US: SAE Other J2735 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment		Connected Vehicle Roadside Equipment		container identification	ISO: Equipment Identification - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment		Intermodal Terminal		container identification	ISO: Equipment Identification - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information	TMC - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2, upon which the ETSI ITS-S security architecture is based, has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	TPEG2 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Management Center	Emergency Vehicle OBE			suggested route	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Fleet and Freight Management Center	Commercial Vehicle OBE			road weather advisories	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center	Personal Information Device			road weather advisories	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center	Vehicle OBE			road weather advisories	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center	Vehicle OBE			work zone information	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Vehicle OBE			lane closure information	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Vehicle OBE			speed management information	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Vehicle OBE			vehicle signage data	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Vehicle OBE			road weather advisories	TPEG2 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Wide Area Information Disseminator			traffic information for media	US: ATIS - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Wide Area Information Disseminator			traffic information for media	US: ATIS - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Transportation Information Center	Wide Area Information Disseminator			traveler information for media	US: ATIS - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Personal Information Device			traveler information	US: ATIS - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Vehicle OBE			traveler information	US: ATIS - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Data Distribution System			traveler request	US: ATIS - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Other EV OBEs			decision support information	US: Incident Management - Guaranteed Mobile Internet (US), with WAVE alternative	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other EV OBEs	Emergency Vehicle OBE			decision support information	US: Incident Management - Guaranteed Mobile Internet (US), with WAVE alternative	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Care Facility			patient status	US: Incident Management - Guaranteed Mobile Internet (X.509)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Maint and Constr Vehicle OBE			environmental sensor data	US: NTCIP Environmental Sensors - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	Connected Vehicle Roadside Equipment			environmental sensor data	US: NTCIP Environmental Sensors - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center	Maint and Constr Vehicle OBE			environmental sensors control	US: NTCIP Environmental Sensors - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center	Maint and Constr Vehicle OBE			maint and constr vehicle system control	US: NTCIP Environmental Sensors - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	Maint and Constr Management Center			environmental sensor data	US: NTCIP Environmental Sensors - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	Maint and Constr Management Center			maint and constr vehicle operational data	US: NTCIP Environmental Sensors - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	US: SAE Signal Control Messages - WAVE UDP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	US: SAE Signal Control Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	US: SAE Signal Control Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Management Center	Emergency Vehicle OBE			work zone warning device control	US: NTCIP Warning Device - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Emergency Management Center			work zone warning status	US: NTCIP Warning Device - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center	Maint and Constr Vehicle OBE			work zone warning device control	US: NTCIP Warning Device - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	Maint and Constr Management Center			work zone warning status	US: NTCIP Warning Device - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle path prediction	US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE	Personal Information Device			vehicle path prediction	US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE	Vehicle OBE			vehicle path prediction	US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs	Connected Vehicle Roadside Equipment			vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs	Transit Vehicle OBE			vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE		Personal Information Device		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE		Vehicle OBE		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle control event	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Emergency Vehicle OBE		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Maint and Constr Vehicle OBE		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Personal Information Device		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Transit Vehicle OBE		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Emergency Management Center		emergency notification	US: SAE J3067 (J2735 SE) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Emergency Management Center		emergency notification relay	US: SAE J3067 (J2735 SE) - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Emergency Management Center		hazmat spill notification	US: SAE J3067 (J2735 SE) - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle Check Equipment		driver log	US: SAE J3067 (J2735 SE) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Commercial Vehicle Check Equipment		freight equipment information	US: SAE J3067 (J2735 SE) - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		freight equipment information	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Emergency Vehicle OBE		hazmat spill notification	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		parking availability	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs		Vehicle OBE		emergency notification relay	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		emergency notification relay	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle reported emissions	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Emergency Vehicle OBE		emergency notification relay	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Other Vehicle OBEs		emergency notification relay	US: SAE J3067 (J2735 SE) - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		commercial vehicle identification	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		driver log	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Intermodal Terminal		commercial vehicle identification	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Parking Management System		commercial vehicle identification	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment		Vehicle OBE		work zone information	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment		Connected Vehicle Roadside Equipment		container location	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment		Connected Vehicle Roadside Equipment		freight equipment information	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment		Intermodal Terminal		container location	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE		Vehicle OBE		work zone information	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Commercial Vehicle Administration Center		driver log	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Commercial Vehicle OBE Service Provider		driver log	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Fleet and Freight Management Center		driver log	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Fleet and Freight Management Center		driver to fleet request	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Fleet and Freight Management Center		emergency notification	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Fleet and Freight Management Center		freight equipment information	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE		Fleet and Freight Management Center		trip log	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Management Center		Emergency Vehicle OBE		suggested route	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE		Emergency Management Center		emergency notification relay	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Fleet and Freight Management Center		Commercial Vehicle OBE		driver log	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Fleet and Freight Management Center		Commercial Vehicle OBE		fleet to driver update	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Freight Equipment		Fleet and Freight Management Center		freight equipment information	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center		Vehicle OBE		current infrastructure restrictions	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE		Transit Management Center		transit vehicle emissions	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Personal Information Device		current infrastructure restrictions	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center		Vehicle OBE		current infrastructure restrictions	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Emergency Management Center		emergency notification	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Emergency Management Center		emergency notification relay	US: SAE J3067 (J2735 SE) - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs		Vehicle OBE		emergency notification	US: SAE J3067 (J2735 SE) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Connected Vehicle Roadside Equipment		emergency notification	US: SAE J3067 (J2735 SE) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Emergency Vehicle OBE		emergency notification	US: SAE J3067 (J2735 SE) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE		Other Vehicle OBEs		emergency notification	US: SAE J3067 (J2735 SE) - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Map Update System		Center		intersection geometry	US: SAE Other J2735 - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Fleet and Freight Management Center		Commercial Vehicle OBE		road weather advisories		US: SAE Other J2735 - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Management Center		Personal Information Device		road weather advisories		US: SAE Other J2735 - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Management Center		Vehicle OBE		road weather advisories		US: SAE Other J2735 - Guaranteed Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Emergency Vehicle OBE		Other EV OBEs		work zone warning notification		US: SAE Other J2735 - Guaranteed Mobile Internet (US), with WAVE alternative	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Other EV OBEs		Emergency Vehicle OBE		work zone warning notification		US: SAE Other J2735 - Guaranteed Mobile Internet (US), with WAVE alternative	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information		US: SAE Other J2735 - Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Commercial Vehicle OBE		Emergency Vehicle OBE		vehicle collision information		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Maint and Constr Vehicle OBE		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Personal Information Device		location correction		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Personal Information Device		personal safety warning		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Personal Information Device		signal service status		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		restricted lanes application info		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Vehicle OBE		arriving train information		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Vehicle OBE		location correction		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Vehicle OBE		rail crossing warning		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Vehicle OBE		restricted lanes application info		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle situation data parameters		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Emergency Vehicle OBE		Personal Information Device		personal safety warning		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Vehicle OBE		Connected Vehicle Roadside Equipment		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Vehicle OBE		Other MCV OBEs		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Other MCV OBEs	Maint and Constr Vehicle OBE		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data		US: SAE Other J2735 - Local Broadcast Wireless (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle environmental data		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Emergency Vehicle OBE	vehicle collision information		US: SAE Other J2735 - Local Broadcast Wireless (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Other Vehicle OBEs		vehicle environmental data		US: SAE Other J2735 - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Connected Vehicle Roadside Equipment	personal signal service request		US: SAE Other J2735 - Local Unicast Wireless (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle situation data		US: SAE Other J2735 - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Fleet and Freight Management Center	vehicle environmental data		US: SAE Other J2735 - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Data Distribution System	Vehicle OBE		vehicle situation data parameters		US: SAE Other J2735 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Emergency Management Center	emergency vehicle tracking data		US: SAE Other J2735 - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Surface Transportation Weather Service	Vehicle OBE		transportation weather information		US: SAE Other J2735 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Vehicle OBE	intersection status		US: SAE Other J2735 - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Vehicle OBE		lane closure information		US: SAE Other J2735 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Vehicle OBE	vehicle situation data parameters		US: SAE Other J2735 - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Data Distribution System		vehicle situation data		US: SAE Other J2735 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Map Update System	vehicle location and motion for mapping		US: SAE Other J2735 - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Transportation Information Center		vehicle situation data		US: SAE Other J2735 - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device	intersection safety warning		US: SAE Other J2735 - WAVE UDP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Vehicle OBE		special vehicle type alert		US: SAE Other J2735 - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE	intersection safety warning		US: SAE Other J2735 - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	Personal Information Device		personal safety warning		US: SAE Other J2735 - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert		US: SAE Other J2735 - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs	Vehicle OBE		intersection infringement info		US: SAE Other J2735 - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert		US: SAE Other J2735 - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Connected Vehicle Roadside Equipment		intersection infringement info		US: SAE Other J2735 - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Other Vehicle OBEs	intersection infringement info		US: SAE Other J2735 - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Personal Information Device		personal safety warning		US: SAE Safety Awareness Messages - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Vehicle OBE	emergency vehicle alert		US: SAE Safety Awareness Messages - Local Broadcast Wireless (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Vehicle OBE		special vehicle type alert		US: SAE Safety Awareness Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Other Vehicle OBEs	Vehicle OBE	vehicle hazard event		US: SAE Safety Awareness Messages - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Vehicle OBE	Other Vehicle OBEs		vehicle hazard event		US: SAE Safety Awareness Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring		US: SAE Signal Control Messages - Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	



Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Personal Information Device			intersection geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			roadway geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Map Update System	Personal Information Device			intersection geometry	US: SAE Signal Control Messages - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Map Update System	Vehicle OBE			intersection geometry	US: SAE Signal Control Messages - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Map Update System	Vehicle OBE			roadway geometry	US: SAE Signal Control Messages - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Commercial Vehicle OBE			intersection status	US: SAE Signal Control Messages - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Emergency Vehicle OBE			intersection status	US: SAE Signal Control Messages - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	US: SAE Signal Control Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device			intersection status	US: SAE Signal Control Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device			pedestrian safety information	US: SAE Signal Control Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	US: SAE Signal Control Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	US: SAE Signal Control Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			transit stop request	US: TCIP - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Transit Vehicle OBE			transit stop request	US: TCIP - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Management Center	Transit Vehicle OBE			alarm acknowledge	US: TCIP - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Transit Management Center			transit stop request	US: TCIP - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center	Personal Information Device			personal transit information	US: TCIP - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center	Transit Vehicle OBE			alarm acknowledge	US: TCIP - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Personal Information Device			local traveler information	US: SAE Traveler Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			vehicle signage data	US: SAE Traveler Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	US: SAE Traveler Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	US: SAE Traveler Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	US: SAE Traveler Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	US: SAE Traveler Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	US: SAE Traveler Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	US: SAE Traveler Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Vehicle OBE			speed management information	US: SAE Traveler Info - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Traffic Management Center	Vehicle OBE			vehicle signage data	US: SAE Traveler Info - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Connected Vehicle Roadside Equipment			personal location	US: SAE VRU Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Emergency Vehicle OBE			personal location	US: SAE VRU Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Maint and Constr Vehicle OBE			personal location	US: SAE VRU Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Transit Vehicle OBE			personal location	US: SAE VRU Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Personal Information Device	Vehicle OBE			personal location	US: SAE VRU Messages - WAVE WSMP	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	US: SAE Weather Info - Local Broadcast Wireless (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Management Center	Emergency Vehicle OBE			road weather advisories for emergency response	US: SAE Weather Info - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Fleet and Freight Management Center	Commercial Vehicle OBE			road weather advisories	US: SAE Weather Info - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center	Personal Information Device			road weather advisories	US: SAE Weather Info - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Maint and Constr Management Center	Vehicle OBE			road weather advisories	US: SAE Weather Info - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Vehicle OBE			road weather advisories	US: SAE Weather Info - Mobile Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Alternate Mode Transportation Center	Transit Management Center			multimodal service data	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Alternate Mode Transportation Center	Transit Management Center			service information response	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Alternate Mode Transportation Center	Transportation Information Center			multimodal service data	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Connected Vehicle Roadside Equipment	Public Information Device			transit vehicle information	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Emergency Management Center	Public Information Device			alarm acknowledge	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Connected Vehicle Roadside Equipment			transit stop request	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Connected Vehicle Roadside Equipment			transit traveler information	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Emergency Management Center			alarm notification	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Transit Management Center			alarm notification	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Transit Management Center			transit fare and passenger status	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Public Information Device	Transit Management Center			transit stop request	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center	Alternate Mode Transportation Center			service information request	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center	Alternate Mode Transportation Center			transit multimodal information	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center	Public Information Device			transit fare information	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transit Management Center	Public Information Device			transit traveler information	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	
Transportation Information Center	Alternate Mode Transportation Center			service information request	US: TCIP - Guaranteed Internet (US)	The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Misbehavior detection and security revocation mechanism	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Personal Information Device			transit stop guidance	US: TCIP - Local Broadcast Wireless (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			transit vehicle information	US: TCIP - Local Broadcast Wireless (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Personal Information Device			transit vehicle information	US: TCIP - Local Broadcast Wireless (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Management Center	Transit Vehicle OBE			connection protection instructions	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Management Center	Transit Vehicle OBE			fare management information	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Management Center	Transit Vehicle OBE			transit schedule information	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Management Center	Transit Vehicle OBE			transit stop request	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Management Center	Transit Vehicle OBE			transit traveler information	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Management Center	Transit Vehicle OBE			transit vehicle operator information	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Emergency Management Center			alarm notification	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Transit Management Center			alarm notification	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Transit Management Center			demand response passenger and use data	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Transit Management Center			fare collection data	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Transit Management Center			transit vehicle conditions	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Transit Management Center			transit vehicle loading data	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Transit Management Center			transit vehicle location data	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Transit Vehicle OBE	Transit Management Center			transit vehicle schedule performance	US: TCIP - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Maint and Constr Management Center	Vehicle OBE			work zone information	US: TMDD - Mobile Internet (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Personal Information Device	Connected Vehicle Roadside Equipment			service payment information	US: WAVE Tolling - Local Unicast Wireless (US)		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment request	US: WAVE Tolling - WAVE UDP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment update	US: WAVE Tolling - WAVE UDP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
ITS Roadway Payment Equipment	Vehicle OBE			vehicle payment request	US: WAVE Tolling - WAVE UDP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
ITS Roadway Payment Equipment	Vehicle OBE			vehicle payment update	US: WAVE Tolling - WAVE UDP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Vehicle OBE	Connected Vehicle Roadside Equipment			service payment information	US: WAVE Tolling - WAVE UDP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Vehicle OBE	ITS Roadway Payment Equipment			service payment information	US: WAVE Tolling - WAVE UDP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment request	US: WAVE Tolling - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle payment update	US: WAVE Tolling - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Vehicle OBE	Connected Vehicle Roadside Equipment			service payment information	US: WAVE Tolling - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.
Vehicle OBE	ITS Roadway Payment Equipment			service payment information	US: WAVE Tolling - WAVE WSMP		The mechanism by which trust is revoked from misbehaving actors in IEEE 1609.2 has not been proven.

Class	Security	Timeframe	Urgent	Proposed Resolution	Secure and accurate location and time standards			Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description					Regional Applicability	
Security	Urgent	Secure and accurate location and time standards		Develop/adopt an internationally acceptable standard/solution for synchronising and continuously maintaining location and time information throughout the ITS environment in a secure and reliable manner with sufficient accuracy (including leap seconds) and confidence.					Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.								Severity	Ultra
Relevant Flow Solution Combinations										
Source		Destination		Flow	SolutionName			Notes		
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)			Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Vehicle OBE		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)			Work on the upper layer standards related to this solution have not been started.		
Issue Description:	The performance rules are not fully defined for this information flow.								Severity	Medium
Relevant Flow Solution Combinations										
Source		Destination		Flow	SolutionName			Notes		
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)			SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Connected Vehicle Roadside Equipment		Vehicle OBE		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)			SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	US: SAE Other J2735 - Local Broadcast Wireless (US)			SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Connected Vehicle Roadside Equipment		Vehicle OBE		location correction	US: SAE Other J2735 - Local Broadcast Wireless (US)			SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Issue Description:	The solution does not provide adequate communications security for the information triple, which potentially jeopardizes C-ITS operations.								Severity	Medium
Relevant Flow Solution Combinations										
Source		Destination		Flow	SolutionName			Notes		
Field Location and Time Data Source		Connected Vehicle Roadside Equipment		location and time	Location/Time reference - Positioning			Recent experiments have revealed that GPS-styled signals can be spoofed and cause significant drifting; this is a security issue that should be addressed in the standards.		
Field Location and Time Data Source		Connected Vehicle Roadside Equipment		location and time	Location/Time reference - Positioning			Satellite signals can easily be jammed resulting in a denial of service.		
Personal Location and Time Data Source		Personal Information Device		location and time	Location/Time reference - Positioning			Recent experiments have revealed that GPS-styled signals can be spoofed and cause significant drifting; this is a security issue that should be addressed in the standards.		
Personal Location and Time Data Source		Personal Information Device		location and time	Location/Time reference - Positioning			Satellite signals can easily be jammed resulting in a denial of service.		
Vehicle Location and Time Data Source		Vehicle OBE		location and time	Location/Time reference - Positioning			Recent experiments have revealed that GPS-styled signals can be spoofed and cause significant drifting; this is a security issue that should be addressed in the standards.		
Vehicle Location and Time Data Source		Vehicle OBE		location and time	Location/Time reference - Positioning			Satellite signals can easily be jammed resulting in a denial of service.		
Network Time Source		Center		time	NTP - UDP/IP			NTP has known security limitations that allow the signal to be spoofed		
Network Time Source		Data Distribution System		time	NTP - UDP/IP			NTP has known security limitations that allow the signal to be spoofed		
Network Time Source		Service Monitor System		time	NTP - UDP/IP			NTP has known security limitations that allow the signal to be spoofed		
Service Monitor System		Center		time local form	NTP - UDP/IP			NTP has known security limitations that allow the signal to be spoofed		
Service Monitor System		Data Distribution System		time local form	NTP - UDP/IP			NTP has known security limitations that allow the signal to be spoofed		



Class	Security	Timeframe	Urgent	Proposed Resolution	Secure installation/update of software	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description			Regional Applicability	
Security	Urgent	Secure installation/update of software		Develop an internationally acceptable standard for the secure installation, update, and validation of software (including application, support, and OS software) on devices. The process should allow a system to determine which devices have been updated and provide a mechanism to define when such updates are allowed, recommended, and required.			Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Center		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE application install/upgrade	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Center		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Center		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE application install/upgrade	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Center		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE application install/upgrade	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.		
Center		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE application install/upgrade	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.		
Center		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE application install/upgrade	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.		
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE application install/upgrade	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.		

Class	Security	Timeframe	Urgent	Proposed Resolution	Security and credentials management - base services	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description			Regional Applicability	
Security	Urgent	Security and credentials management - base services		Develop an internationally acceptable standard for the security policy and networking information, device enrolment information, security credentials, security credential revocations, and misbehaviour report information triples contained within the Security and Credentials Management Service Package.			Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Center		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Center		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Center		security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Center		security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Center		security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Connected Vehicle Roadside Equipment		security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Connected Vehicle Roadside Equipment		security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Connected Vehicle Roadside Equipment		security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Data Distribution System		security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Data Distribution System		security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Data Distribution System		security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Service Monitor System		security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Service Monitor System		security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Service Monitor System		security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security credential revocations	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.		

Class	Security	Timeframe	Urgent	Proposed Resolution	Security and credentials management - base services	Regional Applicability	Australia, European Union, United States
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security credentials	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security policy and networking information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Data Distribution System		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Data Distribution System		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Object Registration and Discovery Service		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Object Registration and Discovery Service		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Service Monitor System		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Service Monitor System		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security credential revocations	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security credentials	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Object Registration and Discovery Service		security policy and networking information	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Object Registration and Discovery Service		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Object Registration and Discovery Service		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Personal Information Device		security credential revocations	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Personal Information Device		security credentials	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Personal Information Device		security policy and networking information	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Vehicle OBE		security credential revocations	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Vehicle OBE		security credentials	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Vehicle OBE		security policy and networking information	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Personal Information Device		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Personal Information Device		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Vehicle OBE		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	

Class	Security	Timeframe	Urgent	Proposed Resolution	Security and credentials management - base services	Regional Applicability	Australia, European Union, United States
Vehicle OBE		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Guaranteed Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security credential revocations	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security credentials	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Cooperative ITS Credentials Management System		Wide Area Information Disseminator		security policy and networking information	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		device enrollment information	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Wide Area Information Disseminator		Cooperative ITS Credentials Management System		misbehavior report	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.	
Security Credentials Registry		Commercial Vehicle Check Equipment		security credentials	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.	
Commercial Vehicle Check Equipment		Commercial Vehicle OBE Service Provider		security credentials	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.	
Commercial Vehicle Check Equipment		Commercial Vehicle OBE Service Provider		security credentials	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.	
Security Credentials Registry		Commercial Vehicle Check Equipment		security credentials	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.	



Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Private location and address	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Security	Urgent	V-L: Private location and address	Develop an internationally acceptable ITS application specification that defines the operation of a Privacy Protection Gateway.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Privacy Protection Gateway	Center	protected location and address flow	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Privacy Protection Gateway	Cooperative ITS Credentials Management System	protected location and address flow	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Privacy Protection Gateway	Center	protected location and address flow	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Cooperative ITS Credentials Management System	protected location and address flow	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Privacy Protection Gateway	Center	protected location and address flow	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Privacy Protection Gateway	Center	protected location and address flow	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Personal Information Device	Connected Vehicle Roadside Equipment	private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Connected Vehicle Roadside Equipment	private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Privacy Protection Gateway	private location and address flow	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Personal Information Device	Connected Vehicle Roadside Equipment	private location and address flow	(None-Data) - Local Unicast Wireless (US)	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Connected Vehicle Roadside Equipment	private location and address flow	(None-Data) - Local Unicast Wireless (US)	Work on the upper layer standards related to this solution have not been started.				
Personal Information Device	Privacy Protection Gateway	private location and address flow	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Personal Information Device	Privacy Protection Gateway	private location and address flow	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Privacy Protection Gateway	private location and address flow	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Privacy Protection Gateway	Center	protected location and address flow	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	protected location and address flow	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Security	Urgent	V-L: Update GeoNetworking security	Update the GeoNetworking standard to provide secure data exchange where the transmitter of a message is not the same of the generator of the message (e.g., a message generated by a central system and sent to the RSE for transmission or a message generated by one vehicle and rebroadcast by another vehicle).				Australia, European Union	
Issue Description:	The solution does not provide adequate communications security for the information triple, which potentially jeopardizes C-ITS operations.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Vehicle OBE	rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.				
Connected Vehicle Roadside Equipment	Vehicle OBE	rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven				
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.				
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Personal Information Device	Connected Vehicle Roadside Equipment	personal location	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Personal Information Device	Connected Vehicle Roadside Equipment	personal location	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Personal Information Device	Connected Vehicle Roadside Equipment	personal location	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Personal Information Device	Vehicle OBE	personal location	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Personal Information Device	Vehicle OBE	personal location	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Personal Information Device	Vehicle OBE	personal location	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle road information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle road information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle road information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	





Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Maint and Constr Vehicle OBE	ITS Roadway Equipment			roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	ITS Roadway Equipment			video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs	Vehicle OBE			vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs	Vehicle OBE			vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs	Vehicle OBE			vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Personal Information Device	Connected Vehicle Roadside Equipment			private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Personal Information Device	Connected Vehicle Roadside Equipment			private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Personal Information Device	Connected Vehicle Roadside Equipment			private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Personal Information Device	Connected Vehicle Roadside Equipment			private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Vehicle OBE		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		service response	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		service response	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		service response	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		service response	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Commercial Vehicle OBE		Fleet and Freight Management Center		vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Fleet and Freight Management Center		vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Commercial Vehicle OBE		Fleet and Freight Management Center		vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	







Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle ID	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle ID	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle ID	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Other Vehicle OBEs			vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE	Other Vehicle OBEs			vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Other Vehicle OBEs			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE	Other Vehicle OBEs			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Personal Information Device			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Personal Information Device			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE	Personal Information Device			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	





Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		queue warning information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		queue warning information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		queue warning information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		queue warning information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	



Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Other Vehicle OBEs		vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTM/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	



Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		intersection status monitoring		EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		intersection status monitoring		EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		intersection status monitoring		EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection status		EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment		local signal priority request		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment		local signal priority request		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment		local signal priority request		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment		local signal priority request		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Personal Information Device		intersection geometry		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTMP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Personal Information Device		intersection geometry		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Personal Information Device			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Personal Information Device			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking availability	EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	

Class	Security	Timeframe	Urgent	Proposed Resolution	V-L: Update GeoNetworking security	Regional Applicability	Australia, European Union	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Urgent	C-C: AU incident information	Adopt an existing incident management centre-to-centre data profile for use within the region.				Australia	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Transportation Information Center	incident information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Emergency Management Center	incident information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Maint and Constr Management Center	incident information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Emergency Management Center	Transportation Information Center	incident information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Traffic Management Center	work zone information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Transportation Information Center	work zone information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Other Transportation Information Centers	Transportation Information Center	incident information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Transportation Information Center	Fleet and Freight Management Center	incident information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Transportation Information Center	Other Transportation Information Centers	incident information	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				

Class	Centre	Timeframe	Urgent	Proposed Resolution	C-C: AU traffic management data	Regional Applicability	Australia
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Class	Timeframe	Proposed Resolution	Description	Regional Applicability
Centre	Urgent	C-C: AU traffic management data	Adopt an existing traffic management centre-to-centre data profile for use within the region.	Australia

Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.	Severity	Ultra
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Relevant Flow Solution Combinations				
Source	Destination	Flow	SolutionName	Notes
Traffic Management Center	Other Traffic Management Centers	road network conditions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Traffic Management Center	Transportation Information Center	road network conditions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Traffic Management Center	Emergency Management Center	road network conditions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Traffic Management Center	Maint and Constr Management Center	road network conditions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Other Traffic Management Centers	Traffic Management Center	device data	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Other Traffic Management Centers	Traffic Management Center	device status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Other Traffic Management Centers	Traffic Management Center	road network conditions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Other Transportation Information Centers	Transportation Information Center	road network conditions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Traffic Management Center	Other Traffic Management Centers	device data	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Traffic Management Center	Other Traffic Management Centers	device status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Transportation Information Center	Fleet and Freight Management Center	road network conditions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.
Transportation Information Center	Other Transportation Information Centers	road network conditions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.



Class	Centre	Timeframe	Urgent	Proposed Resolution	C-C: Distribute maps	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Urgent	C-C: Distribute maps	Develop an internationally acceptable ITS application specification that defines the rules for updating maps, roadway geometry, and intersection geometry among centres (e.g., between a Map Update System and a centre).				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Map Update System	Parking Management System	parking facility geometry	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Other Map Update Systems	Map Update System	map update coordination	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Parking Management System	Map Update System	parking facility geometry	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Map Update System	map update notification	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Parking Management System	parking facility geometry	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Parking Management System	Map Update System	parking facility geometry	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Center	Map Update System	map update notification	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Map Update System	current infrastructure restrictions	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Center	map updates	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Other Map Update Systems	map update coordination	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Other Map Update Systems	Map Update System	map update coordination	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Parking Management System	Map Update System	parking facility geometry	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Map Update System	map update notification	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Parking Management System	parking facility geometry	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Center	map updates	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Center	Map Update System	map update notification	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Map Update System	current infrastructure restrictions	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Center	intersection geometry	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Center	map updates	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Other Map Update Systems	map update coordination	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Other Map Update Systems	Map Update System	map update coordination	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Parking Management System	Map Update System	parking facility geometry	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Map Update System	map update notification	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Center	Map Update System	map update notification	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Map Update System	current infrastructure restrictions	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Center	map updates	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Other Map Update Systems	map update coordination	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Parking Management System	parking facility geometry	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Other Map Update Systems	Map Update System	map update coordination	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Parking Management System	Map Update System	parking facility geometry	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Map Update System	map update notification	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Map Update System	map update notification	(None-Data) - ODG-OCIT-C	Work on the upper layer standards related to this solution have not been started.				

Class	Centre	Timeframe	Urgent	Proposed Resolution	C-C: Distribute maps	Regional Applicability	Australia, European Union, United States	
Center	Map Update System		map update notification		(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.		
Map Update System	Center	map updates		(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.			
Map Update System	Other Map Update Systems		map update coordination		(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.		
Map Update System	Parking Management System		parking facility geometry		(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.		
Map Update System	Center		intersection geometry		EU: Signal Control Messages - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.		
Map Update System	Center	intersection geometry		US: SAE Other J2735 - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.			
Map Update System	Center		intersection geometry		US: SAE Signal Control Messages - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Map Update System	Center	intersection geometry		US: SAE Signal Control Messages - OMG DDS	Work on the upper layer standards related to this solution have not been started.			
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Map Update System	Center	intersection geometry	(None-Data) - Internet (X.509)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Map Update System	Center	intersection geometry	(None-Data) - Internet (X.509)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Map Update System	Center	intersection geometry	EU: Signal Control Messages - DATEX Messaging TCP		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Map Update System	Center	intersection geometry	EU: Signal Control Messages - DATEX Messaging TCP		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Map Update System	Center	intersection geometry	US: SAE Other J2735 - Guaranteed Internet (US)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Map Update System	Center	intersection geometry	US: SAE Other J2735 - Guaranteed Internet (US)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Map Update System	Center	intersection geometry	US: SAE Signal Control Messages - NTCIP Messaging		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Map Update System	Center	intersection geometry	US: SAE Signal Control Messages - NTCIP Messaging		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Map Update System	Center	intersection geometry	US: SAE Signal Control Messages - OMG DDS		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Map Update System	Center	intersection geometry	US: SAE Signal Control Messages - OMG DDS		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Issue Description:	A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Map Update System	Center	intersection geometry	US: SAE Signal Control Messages - NTCIP Messaging		The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev			
Map Update System	Center	intersection geometry	US: SAE Signal Control Messages - OMG DDS		The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev			

Class	Centre	Timeframe	Urgent	Proposed Resolution	C-C: Road work information	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution		Description			Regional Applicability	
Centre	Urgent	C-C: Road work information		Develop an internationally acceptable ITS application specification for C-C exchange of road works and seasonal maintenance data.			Australia, European Union	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Maint and Constr Management Center		Traffic Management Center		work zone information	EU: DATEX - DATEX Messaging TCP	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Maint and Constr Management Center		Transportation Information Center		work zone information	EU: DATEX - DATEX Messaging TCP	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		

Class	Centre	Timeframe	Urgent	Proposed Resolution	C-C: Situation data	Regional Applicability	Australia, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Urgent	C-C: Situation data	Develop an internationally acceptable ITS application specification for the use case of distributing collected situation data (e.g., BSMs, CAMs, sensors, etc.) among various centres.				Australia, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - NTCIP Messaging	Data may be similar to TMDD, but TMDD does not explicitly define how to aggregate data from vehicles.		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - NTCIP Messaging	The TMDD defines how to exchange raw environmental data but does not define how to exchange aggregated data		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - OMG DDS	Data may be similar to TMDD, but TMDD does not explicitly define how to aggregate data from vehicles.		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - OMG DDS	The TMDD defines how to exchange raw environmental data but does not define how to exchange aggregated data		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Traffic Management Center		road network environmental situation data	EU: DATEX - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.		
Issue Description:	Required data elements are not defined.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - NTCIP Messaging	Data may be similar to TMDD, but TMDD does not explicitly define how to aggregate data from vehicles.		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - NTCIP Messaging	The TMDD defines how to exchange raw environmental data but does not define how to exchange aggregated data		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - OMG DDS	Data may be similar to TMDD, but TMDD does not explicitly define how to aggregate data from vehicles.		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - OMG DDS	The TMDD defines how to exchange raw environmental data but does not define how to exchange aggregated data		
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - NTCIP Messaging	Data may be similar to TMDD, but TMDD does not explicitly define how to aggregate data from vehicles.		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - NTCIP Messaging	The TMDD defines how to exchange raw environmental data but does not define how to exchange aggregated data		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - OMG DDS	Data may be similar to TMDD, but TMDD does not explicitly define how to aggregate data from vehicles.		
Transportation Information Center		Traffic Management Center		road network environmental situation data	(None-Data) - OMG DDS	The TMDD defines how to exchange raw environmental data but does not define how to exchange aggregated data		



Class	Centre	Timeframe	Urgent	Proposed Resolution	C-C: System monitoring	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Urgent	C-C: System monitoring	Develop an internationally acceptable ITS application specification for the Service Monitor System to monitor other centers and support systems and to report issues.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName	Notes			
Wide Area Information Disseminator		Service Monitor System	support system status	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.			
Center		Service Monitor System	system monitoring	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.			
Data Distribution System		Service Monitor System	support system status	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.			
Wide Area Information Disseminator		Service Monitor System	support system status	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.			
Data Distribution System		Service Monitor System	support system status	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.			
Data Distribution System		Service Monitor System	support system status	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.			
Wide Area Information Disseminator		Service Monitor System	support system status	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.			
Center		Service Monitor System	system monitoring	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.			
Data Distribution System		Service Monitor System	support system status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.			
Wide Area Information Disseminator		Service Monitor System	support system status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.			
Center		Service Monitor System	system monitoring	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.			
Data Distribution System		Service Monitor System	support system status	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.			
Center		Service Monitor System	system monitoring	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.			

Class	Centre	Timeframe	Urgent	Proposed Resolution	C-C: WAID	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description			Regional Applicability	
Centre	Urgent	C-C: WAID		Develop an internationally acceptable ITS application specification for providing information from a centre to a WAID for wide-area dissemination.			Australia, European Union, United States	
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Traffic Management Center		Media		traffic information for media	TPEG2 - DATEX Messaging TCP	The rules for sending TPEG over DATEX messaging are not defined; the excahnge will need to include meta-data describing the rules for broadcasting the information to vehicles.		
Traffic Management Center		Wide Area Information Disseminator		traffic information for media	TPEG2 - DATEX Messaging TCP	The rules for sending TPEG over DATEX messaging are not defined; the excahnge will need to include meta-data describing the rules for broadcasting the information to vehicles.		
Transportation Information Center		Media		traffic information for media	TPEG2 - DATEX Messaging TCP	The rules for sending TPEG over DATEX messaging are not defined; the excahnge will need to include meta-data describing the rules for broadcasting the information to vehicles.		
Transportation Information Center		Wide Area Information Disseminator		traffic information for media	TPEG2 - DATEX Messaging TCP	The rules for sending TPEG over DATEX messaging are not defined; the excahnge will need to include meta-data describing the rules for broadcasting the information to vehicles.		
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information	EU: DATEX - DATEX Messaging TCP	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information	TMC - Internet (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information	TPEG2 - Guaranteed Internet (X.509)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information	TPEG2 - NTCIP Messaging	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information	US: SAE Other J2735 - Internet (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information	US: SAE Other J2735 - Internet (US)	The parameters associated with the J2735 message defining where the WAID should broadcast the message (etc) are not currently defined.		
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Transportation Information Center		Wide Area Information Disseminator		broadcast traveler information	US: SAE Other J2735 - Internet (US)	The parameters associated with the J2735 message defining where the WAID should broadcast the message (etc) are not currently defined.		

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Application management	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Urgent	I-F: Application management	Develop an internationally acceptable ITS application specification for generically managing applications (e.g., enabling, monitoring, etc.) within an RSE.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Center	Connected Vehicle Roadside Equipment	RSE application information	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Center	Connected Vehicle Roadside Equipment	RSE control commands	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	RSE application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE configuration settings	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE control commands	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Maint and Constr Management Center	vehicle signage application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Service Monitor System	RSE status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	intersection management application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	intersection safety application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	speed management application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	traffic monitoring application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	vehicle signage application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	work zone application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Field Support Equipment	Connected Vehicle Roadside Equipment	RSE configuration settings	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Field Support Equipment	Connected Vehicle Roadside Equipment	RSE control commands	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Field Support Equipment	Connected Vehicle Roadside Equipment	RSE status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	queue warning application status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	speed management application information	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	queue warning application status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	work zone application info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Center	RSE application status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Connected Vehicle Roadside Equipment	vehicle signage application info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	intersection management application info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	intersection safety application info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	queue warning application information	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	traffic monitoring application info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	vehicle signage application info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Tunnel Management System	Connected Vehicle Roadside Equipment	vehicle signage application info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Center	Connected Vehicle Roadside Equipment	RSE application information	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Center	Connected Vehicle Roadside Equipment	RSE control commands	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Field Support Equipment	RSE configuration settings	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				

[illegible]





Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Data aggregation	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Urgent	I-F: Data aggregation	Develop an internationally acceptable ITS application specification for an RSE to aggregate collected data and report the information to interested parties (e.g., centres).				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	traffic situation data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	environmental situation data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	traffic situation data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	situation data collection parameters	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	traffic situation data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	environmental situation data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	traffic situation data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Data Distribution System	Connected Vehicle Roadside Equipment	situation data collection parameters	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	situation data collection parameters	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Data Distribution System	Connected Vehicle Roadside Equipment	situation data collection parameters	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	traffic situation data	(None-Data) - ODG-OCIT-O	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Maint and Constr Management Center	environmental situation data	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	environmental situation data	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Data Distribution System	Connected Vehicle Roadside Equipment	situation data collection parameters	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	situation data collection parameters	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Maint and Constr Management Center	environmental situation data	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	environmental situation data	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Data Distribution System	Connected Vehicle Roadside Equipment	situation data collection parameters	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	situation data collection parameters	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	traffic situation data	(None-Data) - UTMCI	Work on the upper layer standards related to this solution have not been started.				

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Data aggregation	Regional Applicability	Australia, European Union, United States			
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium		
Relevant Flow Solution Combinations										
Source	Destination	Flow	SolutionName	Notes						
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	EU: DATEX - DATEX Messaging TCP	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	traffic situation data	US: NTCIP Transportation Sensors - OMG DDS RPC	Process for converting BSM/probe data into aggregated data and related data specifications (e.g., additional configuration parameters) are not defined.						
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	traffic situation data	US: NTCIP Transportation Sensors - SNMPv3							
Issue Description: A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.									Severity	Medium
Relevant Flow Solution Combinations										
Source	Destination	Flow	SolutionName	Notes						
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - AU IFCP	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Traffic Management Center	environmental situation data	(None-Data) - AU IFCP	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	(None-Data) - AU IFCP	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - EU-ICIP-C2F	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Traffic Management Center	environmental situation data	(None-Data) - EU-ICIP-C2F	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	(None-Data) - EU-ICIP-C2F	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - OMG DDS RPC	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Traffic Management Center	environmental situation data	(None-Data) - OMG DDS RPC	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	(None-Data) - OMG DDS RPC	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	environmental situation data	(None-Data) - SNMPv3	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Traffic Management Center	environmental situation data	(None-Data) - SNMPv3	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	(None-Data) - SNMPv3	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						
Connected Vehicle Roadside Equipment	Transportation Information Center	environmental situation data	EU: DATEX - DATEX Messaging TCP	This only reflects a current proposal to expand DATEX to support this flow; it has not yet been standardized						

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Distribute maps	Regional Applicability	Australia, European Union, United States, Japan	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Urgent	I-F: Distribute maps	Develop an internationally acceptable ITS application specification that defines the rules for distributing maps, roadway geometry, and intersection geometry between a centres (e.g., a Map Update System) and field equipment.				Australia, European Union, United States, Japan	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Map Update System	Connected Vehicle Roadside Equipment	map updates	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	parking facility geometry	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Public Information Device	map updates	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	map updates	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	parking facility geometry	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Public Information Device	map updates	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Public Information Device	map updates	(None-Data) - Guaranteed Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Public Information Device	map updates	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	map updates	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	parking facility geometry	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	map updates	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	parking facility geometry	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	DDS: SAE Signal Control Messages - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	US: SAE Signal Control Messages - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	US: SAE Signal Control Messages - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	EU: Signal Control Messages - EU-ICIP-C2F	The precise rules for how to provide intersection geometry over EU-ICIP has not been defined.				
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Other J2735 - SNMPv3	SAE J2735 was not designed to be implemented over SNMP messaging; interface details need to be defined.				
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Signal Control Messages - SNMPv3					
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	US: SAE Signal Control Messages - SNMPv3					



Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Distribute maps	Regional Applicability	Australia, European Union, United States, Japan			
Issue Description:	A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.						Severity	Medium		
Relevant Flow Solution Combinations										
Source	Destination	Flow	SolutionName	Notes						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Signal Control Messages - OMG DDS RPC	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev						
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	US: SAE Signal Control Messages - OMG DDS RPC	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Signal Control Messages - SNMPv3	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev						
Map Update System	Connected Vehicle Roadside Equipment	roadway geometry	US: SAE Signal Control Messages - SNMPv3	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev						
Issue Description: The performance rules are not fully defined for this information flow.									Severity	Medium
Relevant Flow Solution Combinations										
Source	Destination	Flow	SolutionName	Notes						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	DDS: SAE Other J2735 - OMG DDS	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	DDS: SAE Other J2735 - OMG DDS	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	EU: Signal Control Messages - EU-ICIP-C2F	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	EU: Signal Control Messages - EU-ICIP-C2F	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Other J2735 - SNMPv3	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Other J2735 - SNMPv3	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Signal Control Messages - OMG DDS RPC	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Signal Control Messages - OMG DDS RPC	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Signal Control Messages - SNMPv3	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages						
Map Update System	Connected Vehicle Roadside Equipment	intersection geometry	US: SAE Signal Control Messages - SNMPv3	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme						

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: EU signal operations	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Urgent	I-F: EU signal operations	Develop an ITS application specification for exchanging configuration, plans, status, and commands for signal control and signal systems using the secure centre-to-field protocol.				Australia, European Union	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	right-of-way request notification	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal system configuration	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Other Traffic Signal Controller	local priority request details	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	right-of-way request notification	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	signal control status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Other Traffic Signal Controller	ITS Roadway Equipment	local priority request details	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control commands	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control plans	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal system configuration	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	(None-Data) - ODG-OCIT-O	Work on the upper layer standards related to this solution have not been started.				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	(None-Data) - ODG-OCIT-O	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	AU TRAFF - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	signal control status	AU TRAFF - AU TRAFF Comms	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control commands	AU TRAFF - AU TRAFF Comms	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	AU TRAFF - AU TRAFF Comms	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control plans	AU TRAFF - AU TRAFF Comms	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	right-of-way request notification	DDS: NTCIP Signal Priority - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control commands	DDS: NTCIP Signal System Masters - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	DDS: NTCIP Signal System Masters - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	signal system configuration	DDS: NTCIP Signal System Masters - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	DDS: NTCIP Traffic Signal - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	signal control status	DDS: NTCIP Traffic Signal - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				

[illegible]

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: EU signal operations	Regional Applicability	Australia, European Union		
Traffic Management Center		ITS Roadway Equipment		signal control plans		US: NTCIP Traffic Signal - SNMPv1/TLS		Work on the upper layer standards related to this solution have not been started.	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data		US: NTCIP Traffic Signal - SNMPv3		Work on the upper layer standards related to this solution have not been started.	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data		US: NTCIP Traffic Signal - SNMPv3		Work on the upper layer standards related to this solution have not been started.	
Traffic Management Center		ITS Roadway Equipment		signal control plans		US: NTCIP Traffic Signal - SNMPv3		Work on the upper layer standards related to this solution have not been started.	
Class	Timeframe	Proposed Resolution		Description					Regional Applicability
Field	Urgent	I-F: Exception-based reporting		Develop an internationally acceptable ITS application specification for managing exception-based reports from other local field devices.					Australia, European Union, United States
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.							Severity	Ultra
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - OMG DDS RPC		Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP		Work on the upper layer standards related to this solution have not been started.		
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - AU IFCP		Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - EU-ICIP-C2F		Work on the upper layer standards related to this solution have not been started.		
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - EU-ICIP-C2F		Work on the upper layer standards related to this solution have not been started.		
Border Inspection System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - SNMPv3		Work on the upper layer standards related to this solution have not been started.		
Parking Management System		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - OMG DDS RPC		Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		vehicle signage local data	(None-Data) - SNMPv3		Work on the upper layer standards related to this solution have not been started.		



Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Message signs	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Urgent	I-F: Message signs	Develop an internationally acceptable ITS application specification for managing message signs for secure communications with proper access control.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	roadway dynamic signage data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	roadway dynamic signage status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway dynamic signage status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway dynamic signage data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Vehicle OBE	roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Vehicle OBE	ITS Roadway Equipment	roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	(None-Data) - ODG-OCIT-O	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	DDS: NTCIP Message Sign - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	DDS: NTCIP Message Sign - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	EU: UTMCI Data - UTMCI	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	EU: UTMCI Data - UTMCI	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	US: NTCIP Message Sign - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	US: NTCIP Message Sign - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	US: NTCIP Message Sign - SNMPv1	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	US: NTCIP Message Sign - SNMPv1	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	US: NTCIP Message Sign - SNMPv1/TLS	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	US: NTCIP Message Sign - SNMPv1/TLS	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	US: NTCIP Message Sign - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	US: NTCIP Message Sign - SNMPv3	Work on the upper layer standards related to this solution have not been started.				

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Message signs	Regional Applicability	Australia, European Union, United States	
Issue Description:	Data has been defined for SNMPv1, but needs to be updated to SNMPv3 format.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Maint and Constr Vehicle OBE	roadway dynamic signage status	US: NTCIP Message Sign - Mobile SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
Maint and Constr Vehicle OBE	ITS Roadway Equipment	roadway dynamic signage data	US: NTCIP Message Sign - Mobile SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	roadway dynamic signage data	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	ITS roadway equipment information	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	roadway dynamic signage status	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway dynamic signage status	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Other ITS Roadway Equipment	dynamic sign coordination	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Traffic Management Center	roadway dynamic signage status	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Traffic Management Center	variable speed limit status	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
Maint and Constr Management Center	ITS Roadway Equipment	roadway dynamic signage data	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
Other ITS Roadway Equipment	ITS Roadway Equipment	dynamic sign coordination	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
Traffic Management Center	ITS Roadway Equipment	lane management control	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
Traffic Management Center	ITS Roadway Equipment	roadway dynamic signage data	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
Traffic Management Center	ITS Roadway Equipment	roadway warning system control	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				
Traffic Management Center	ITS Roadway Equipment	variable speed limit control	US: NTCIP Message Sign - SNMPv3	NTCIP 1203 data needs to be upgraded to SNMPv3.				

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Signal conflict prevention	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Urgent	I-F: Signal conflict prevention	Develop an internationally acceptable ITS application specification for monitoring intersection status information to prevent conflicts between physical displays and broadcast information.				Australia, European Union, United States	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	AU TRAFF - FNTF/M5		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	EU: Signal Control Messages - FNTF/M5		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	EU: Signal Control Messages - Internet (X.509)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	US: SAE Signal Control Messages - WAVE UDP		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	US: SAE Signal Control Messages - Internet (US)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	US: SAE Signal Control Messages - WAVE WSMP		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Signal control	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description			Regional Applicability	
Field	Urgent	I-F: Signal control		Develop an internationally acceptable ITS application specification for the interface between a traffic signal controller and a roadside station to exchange raw data related to the SPaT, SRM, and SSM using the secure centre-to-field protocol.			Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal preemption request	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal service request	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal preemption request	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal service request	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request	(None-Data) - ODG-OCIT-O	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal preemption request	DDS: NTCIP Signal Priority - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request	DDS: NTCIP Signal Priority - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal preemption request	US: NTCIP Signal Priority - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request	US: NTCIP Signal Priority - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal preemption request	US: NTCIP Signal Priority - SNMPv3	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request	US: NTCIP Signal Priority - SNMPv3	Work on the upper layer standards related to this solution have not been started.		
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	US: NTCIP Traffic Signal - OMG DDS RPC	NTCIP 1202 does not fully define the information needed for a SPaT message, such as the information necessary to link to the MAP and some detailed timing data		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	US: NTCIP Traffic Signal - SNMPv3	NTCIP 1202 does not fully define the information needed for a SPaT message, such as the information necessary to link to the MAP and some detailed timing data		



Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Speed warning	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Urgent	I-F: Speed warning	Develop an internationally acceptable ITS application specification for providing roadway configuration data, current speed limits , warning parameters and thresholds to a speed warning application.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Maint and Constr Management Center	reduced speed warning status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	reduced speed warning status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Maint and Constr Management Center	reduced speed warning status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	reduced speed warning status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	variable speed limit status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	variable speed limit control	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Maint and Constr Management Center	reduced speed warning status	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	reduced speed warning status	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Maint and Constr Management Center	reduced speed warning status	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Traffic Management Center	reduced speed warning status	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Connected Vehicle Roadside Equipment	reduced speed warning info	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	variable speed limit status	DDS: NTCIP Message Sign - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	variable speed limit control	DDS: NTCIP Message Sign - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	variable speed limit status	DMS and RWIS data - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	variable speed limit control	DMS and RWIS data - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	variable speed limit status	DMS and RWIS data - DMS and RWIS comms	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	variable speed limit control	DMS and RWIS data - DMS and RWIS comms	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	variable speed limit status	EU: UTMCI Data - UTMCI	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	variable speed limit control	EU: UTMCI Data - UTMCI	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	variable speed limit status	US: NTCIP Message Sign - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	variable speed limit control	US: NTCIP Message Sign - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Speed warning	Regional Applicability	Australia, European Union, United States
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	US: NTCIP Message Sign - SNMPv1	Work on the upper layer standards related to this solution have not been started.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	US: NTCIP Message Sign - SNMPv1	Work on the upper layer standards related to this solution have not been started.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	US: NTCIP Message Sign - SNMPv1/TLS	Work on the upper layer standards related to this solution have not been started.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	US: NTCIP Message Sign - SNMPv1/TLS	Work on the upper layer standards related to this solution have not been started.	
ITS Roadway Equipment		Traffic Management Center		variable speed limit status	US: NTCIP Message Sign - SNMPv3	Work on the upper layer standards related to this solution have not been started.	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control	US: NTCIP Message Sign - SNMPv3	Work on the upper layer standards related to this solution have not been started.	

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: Transportation sensor systems	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Urgent	I-F: Transportation sensor systems	Develop an internationally acceptable ITS application specification for exchanging transportation sensor station data with a management entity that uses the secure centre-to-field protocol.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Maint and Constr Management Center	traffic detector data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	traffic detector data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	traffic detector control	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	traffic detector control	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Management Center	traffic detector data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	traffic detector data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	traffic detector control	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	traffic detector control	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Vehicle OBE	traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Vehicle OBE	ITS Roadway Equipment	traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	traffic detector data	(None-Data) - ODG-OCIT-O	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	traffic detector control	(None-Data) - ODG-OCIT-O	Work on the upper layer standards related to this solution have not been started.				
Issue Description:	Data has been defined for SNMPv1, but needs to be updated to SNMPv3 format.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	traffic situation data	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
Connected Vehicle Roadside Equipment	Traffic Management Center	traffic situation data	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
Connected Vehicle Roadside Equipment	Transportation Information Center	traffic situation data	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Maint and Constr Management Center	speed monitoring information	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Maint and Constr Management Center	traffic detector data	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Other ITS Roadway Equipment	roadway detector coordination	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Traffic Management Center	speed monitoring information	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
ITS Roadway Equipment	Traffic Management Center	traffic detector data	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
Maint and Constr Management Center	ITS Roadway Equipment	speed monitoring control	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
Maint and Constr Management Center	ITS Roadway Equipment	traffic detector control	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
Other ITS Roadway Equipment	ITS Roadway Equipment	roadway detector coordination	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
Traffic Management Center	ITS Roadway Equipment	speed monitoring control	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				
Traffic Management Center	ITS Roadway Equipment	traffic detector control	US: NTCIP Transportation Sensors - SNMPv3	NTCIP 1209 data needs to be upgraded to SNMPv3.				

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: US signal operations	Regional Applicability	United States
Class	Timeframe	Proposed Resolution	Description				Regional Applicability
Field	Urgent	I-F: US signal operations	Develop an ITS application specification for exchanging configuration, plans, status, and commands for signal control and signal systems using the secure centre-to-field protocol.				United States
Issue Description:	The specific dialogs for exchanging this data have not been fully defined.						SeverityMedium
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
ITS Roadway Equipment	Traffic Management Center	pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Traffic Management Center	signal control status	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	pedestrian location information	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	signal service request	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	pedestrian crossing status	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Traffic Management Center	pedestrian safety warning status	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Traffic Management Center	signal control status	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Traffic Management Center	ITS Roadway Equipment	pedestrian safety warning control	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Traffic Management Center	ITS Roadway Equipment	signal control plans	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Traffic Management Center	pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Traffic Management Center	signal control status	US: NTCIP Traffic Signal - SNMPv1	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Traffic Management Center	ITS Roadway Equipment	pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
Traffic Management Center	ITS Roadway Equipment	signal control plans	US: NTCIP Traffic Signal - SNMPv1	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			
ITS Roadway Equipment	Traffic Management Center	pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1/TLS	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.			



Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: US signal operations	Regional Applicability	United States	
ITS Roadway Equipment		Traffic Management Center		signal control status	US: NTCIP Traffic Signal - SNMPv1/TLS	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1/TLS	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
Traffic Management Center		ITS Roadway Equipment		signal control plans	US: NTCIP Traffic Signal - SNMPv1/TLS	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		pedestrian location information	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal service request	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control coordination	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
Traffic Management Center		ITS Roadway Equipment		signal control plans	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.		
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	US: NTCIP Traffic Signal - OMG DDS RPC		NTCIP 1202 does not fully define the information needed for a SPaT message, such as the information necessary to link to the MAP and some detailed timing data			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 does not fully define the information needed for a SPaT message, such as the information necessary to link to the MAP and some detailed timing data			
Issue Description:	A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	US: SAE Signal Control Messages - WAVE UDP		The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	US: SAE Signal Control Messages - Internet (US)		The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev			
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection status monitoring	US: SAE Signal Control Messages - WAVE WSMP		The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev			

Class	Field	Timeframe	Urgent	Proposed Resolution	I-F: US signal operations		Regional Applicability	United States		
Issue Description:	Data has been defined for SNMPv1, but needs to be updated to SNMPv3 format.							Severity	Medium	
Relevant Flow Solution Combinations										
Source	Destination	Flow	SolutionName		Notes					
ITS Roadway Equipment	Traffic Management Center	pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
ITS Roadway Equipment	Traffic Management Center	signal control status	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	signal preemption request	US: NTCIP Signal Priority - SNMPv3		NTCIP 1211 data needs to be upgraded to SNMPv3.					
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	signal priority service request	US: NTCIP Signal Priority - SNMPv3		NTCIP 1211 data needs to be upgraded to SNMPv3.					
ITS Roadway Equipment	Traffic Management Center	right-of-way request notification	US: NTCIP Signal Priority - SNMPv3		NTCIP 1211 data needs to be upgraded to SNMPv3.					
Traffic Management Center	ITS Roadway Equipment	signal control commands	US: NTCIP Signal System Masters - SNMPv3		NTCIP 1210 data needs to be upgraded to SNMPv3.					
Traffic Management Center	ITS Roadway Equipment	signal control device configuration	US: NTCIP Signal System Masters - SNMPv3		NTCIP 1210 data needs to be upgraded to SNMPv3.					
Traffic Management Center	ITS Roadway Equipment	signal system configuration	US: NTCIP Signal System Masters - SNMPv3		NTCIP 1210 data needs to be upgraded to SNMPv3.					
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	pedestrian location information	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	signal service request	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	conflict monitor status	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	intersection control status	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	ITS roadway equipment information	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	pedestrian crossing status	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control data	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control data	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
Traffic Management Center	ITS Roadway Equipment	pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
Traffic Management Center	ITS Roadway Equipment	signal control plans	US: NTCIP Traffic Signal - SNMPv3		NTCIP 1202 data needs to be upgraded to SNMPv3.					
Class	Timeframe	Proposed Resolution		Description					Regional Applicability	
Field	Urgent	I-F: Weather information		Develop an internationally acceptable ITS application specification for directing an RSE to provide weather information to vehicles.					Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.							Severity	Ultra	
Relevant Flow Solution Combinations										
Source	Destination	Flow	SolutionName		Notes					
Connected Vehicle Roadside Equipment	Transportation Information Center	road weather advisory status	(None-Data) - AU IFCP		Work on the upper layer standards related to this solution have not been started.					
Transportation Information Center	Connected Vehicle Roadside Equipment	road weather advisory info	(None-Data) - AU IFCP		Work on the upper layer standards related to this solution have not been started.					
Connected Vehicle Roadside Equipment	Transportation Information Center	road weather advisory status	(None-Data) - EU-ICIP-C2F		Work on the upper layer standards related to this solution have not been started.					
Transportation Information Center	Connected Vehicle Roadside Equipment	road weather advisory info	(None-Data) - EU-ICIP-C2F		Work on the upper layer standards related to this solution have not been started.					
Connected Vehicle Roadside Equipment	Transportation Information Center	road weather advisory status	(None-Data) - OMG DDS RPC		Work on the upper layer standards related to this solution have not been started.					
Transportation Information Center	Connected Vehicle Roadside Equipment	road weather advisory info	(None-Data) - OMG DDS RPC		Work on the upper layer standards related to this solution have not been started.					
Connected Vehicle Roadside Equipment	Transportation Information Center	road weather advisory status	(None-Data) - SNMPv3		Work on the upper layer standards related to this solution have not been started.					
Transportation Information Center	Connected Vehicle Roadside Equipment	road weather advisory info	(None-Data) - SNMPv3		Work on the upper layer standards related to this solution have not been started.					

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: CAM	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: CAM	Develop an internationally acceptable ITS application specification for CAM for each use case where it applies and when the CAM should include optional fields for each condition.				Australia, European Union	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName	Notes			
Transit Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle location and motion	EU: CA Service - FNTP/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Transit Vehicle OBE		Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle control event	EU: CA Service - FNTP/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Commercial Vehicle OBE		Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Emergency Vehicle OBE		Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Maint and Constr Vehicle OBE		Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Other Vehicle OBEs		Connected Vehicle Roadside Equipment	vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Other Vehicle OBEs		Vehicle OBE	vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Other Vehicle OBEs		Vehicle OBE	vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Transit Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Transit Vehicle OBE		Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle ID	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Vehicle OBE		Connected Vehicle Roadside Equipment	vehicle location and motion for surveillance	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Vehicle OBE		Other Vehicle OBEs	vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			
Vehicle OBE		Other Vehicle OBEs	vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle			

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: CAM	Regional Applicability	Australia, European Union
Vehicle OBE		Personal Information Device		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - CEN 5.8Ghz DSRC	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Other Vehicle OBEs	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Other Vehicle OBEs	Vehicle OBE			vehicle location and motion	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle ID	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Vehicle OBE	Other Vehicle OBEs			vehicle control event	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Vehicle OBE	Other Vehicle OBEs			vehicle location and motion	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Vehicle OBE	Personal Information Device			vehicle location and motion	EU: CA Service - FNTF/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment			local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	
Vehicle OBE	Data Distribution System			vehicle situation data	EU: CA Service - Mobile Internet (X.509)	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle	



Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: DENM	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: DENM	Develop an internationally acceptable ITS application specification for DENM for each use case where it applies and when the DENM should include optional fields for each condition.				Australia, European Union	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Other Vehicle OBEs	Vehicle OBE	vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Connected Vehicle Roadside Equipment	wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Other Vehicle OBEs	vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Other Vehicle OBEs	vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Other Vehicle OBEs	vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Other Vehicle OBEs	vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Other Vehicle OBEs	wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	wrong way vehicle detected	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle collision warning	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle control event	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: DENM	Regional Applicability	Australia, European Union
Other Vehicle OBEs	Vehicle OBE		vehicle control event		EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	
Other Vehicle OBEs	Vehicle OBE		vehicle hazard event		EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Other Vehicle OBEs	Vehicle OBE		wrong way vehicle detected		EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle control event		EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle control event		EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	
Vehicle OBE	Connected Vehicle Roadside Equipment		wrong way vehicle detected		EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Other Vehicle OBEs		vehicle collision warning		EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Other Vehicle OBEs		vehicle control event		EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Other Vehicle OBEs		vehicle control event		EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	
Vehicle OBE	Other Vehicle OBEs		vehicle hazard event		EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Other Vehicle OBEs		wrong way vehicle detected		EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Connected Vehicle Roadside Equipment	Vehicle OBE		reduced speed notification		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Connected Vehicle Roadside Equipment	Vehicle OBE		road closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	Road closure information can be transmitted with ISO 19321, TPEG2, or DEN Services	
Connected Vehicle Roadside Equipment	Vehicle OBE		road closure information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Distribute maps	Regional Applicability	Australia, European Union, United States, Japan	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Distribute maps	Develop an internationally acceptable ITS application specification that defines the rules for distributing maps, roadway geometry, and intersection geometry to a vehicle from a local source.				Australia, European Union, United States, Japan	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Vehicle OBE		map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Vehicle OBE		parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Vehicle OBE		roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Vehicle OBE		map updates	(None-Data) - Local Broadcast Wireless (US)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Vehicle OBE		parking facility geometry	(None-Data) - Local Broadcast Wireless (US)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Vehicle OBE		roadway geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	Work on the upper layer standards related to this solution have not been started.		
Issue Description:	A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Personal Information Device		intersection geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev		
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev		
Connected Vehicle Roadside Equipment		Vehicle OBE		roadway geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev		
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Personal Information Device		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Personal Information Device		intersection geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection geometry	US: SAE Signal Control Messages - Local Broadcast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Environmental data sharing	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Environmental data sharing	Develop an internationally acceptable ITS application specification for sharing environmental data from vehicles to other local entities. The effort should consider efforts to date under both J2735 and DENM.				Australia, European Union, United States	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Transportation Information Center	vehicle environmental data	EU: DEN Service - Mobile Internet (X.509)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Transportation Information Center	vehicle environmental data	EU: DEN Service - Mobile Internet (X.509)	Unclear rules on when to send CAM vs. DENM for this information				



Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Environmental data sharing	Regional Applicability	Australia, European Union, United States	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - FNTp/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	US: SAE Other J2735 - Local Broadcast Wireless (US)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	US: SAE Other J2735 - Local Broadcast Wireless (US)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	US: SAE Other J2735 - Local Broadcast Wireless (US)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: EU signal operations	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: EU signal operations	Develop an ITS application specification for providing intersection status information to vehicles from the roadside.				Australia, European Union	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - FNTF/M5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	AU TRAFF - FNTF/M5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		intersection status	AU TRAFF - FNTF/M5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection status	AU TRAFF - FNTF/M5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	EU: Signal Control Messages - CEN 5.8Ghz DSRC	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	EU: Signal Control Messages - FNTF/M5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	EU: Signal Control Messages - FNTF/M5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: EU signal operations	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	EU: Signal Control Messages - FNTF/M5	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	EU: Signal Control Messages - FNTF/M5		
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	US: SAE Signal Control Messages - WAVE WSMP	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	US: SAE Signal Control Messages - WAVE WSMP		
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	US: SAE Signal Control Messages - WAVE WSMP	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	US: SAE Signal Control Messages - WAVE WSMP		

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: EU signal priority	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: EU signal priority	Develop an ITS application specification for a traffic signal to provide pre-emption or priority to authorised vehicles.				Australia, European Union	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName		Notes		
Connected Vehicle Roadside Equipment		Transit Vehicle OBE	signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: CA Service - BTP/GeoNetworking/G5		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - BTP/GeoNetworking/G5		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: CA Service - FNTF/M5		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - FNTF/M5		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - CEN 5.8Ghz DSRC		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - CEN 5.8Ghz DSRC		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - CEN 5.8Ghz DSRC		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE	signal priority status	EU: Signal Control Messages - CEN 5.8Ghz DSRC		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE	signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE	signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		



Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: EU signal priority	Regional Applicability	Australia, European Union
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	ISO 19091 does not give clear guidelines on when CAM should be used vs SRM	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme	

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: EU signal priority	Regional Applicability	Australia, European Union	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - BTP/GeoNetworking/G5	ISO 19091 does not give clear guidelines on when CAM should be used vs SRM				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - BTP/GeoNetworking/G5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - FNTM/M5	ISO 19091 does not give clear guidelines on when CAM should be used vs SRM				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - FNTM/M5	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	ISO 19091 does not give clear guidelines on when CAM should be used vs SRM				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	ISO 19091 does not give clear guidelines on when CAM should be used vs SRM				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle				
Transit Vehicle OBE	Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	ISO 19091 does not give clear guidelines on when CAM should be used vs SRM				
Transit Vehicle OBE	Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	US: SAE Signal Preemption - Local Unicast Wireless (US)	Vehicle length does not include information for articulation points impacting several use cases such as turning vehicle				

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: EU vehicle signage data	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: EU vehicle signage data	Develop an ITS application specification for providing vehicle signage data to vehicles over DSRC.				Australia, European Union	
Issue Description:	The performance rules are not defined for this information flow.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)	Overlap between ETSI 102 638 and ISO 14823				
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)	Performance requirements for IVI data transmission are not specified.				
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Issue Description:	Multiple standards have been developed to address this information and it is unclear which standard should be used to address this specific information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services				

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: EU vehicle signage data	Regional Applicability	Australia, European Union	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Vehicle signage data can be transmitted with ISO 19321 or DEN Services (V2V)				
Connected Vehicle Roadside Equipment	Vehicle OBE	reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	Overlap between IVI and Contextual Speed Information				
Connected Vehicle Roadside Equipment	Vehicle OBE	speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Vehicle signage data can be transmitted with ISO 19321 or DEN Services (V2V)				
Connected Vehicle Roadside Equipment	Vehicle OBE	reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between IVI and Contextual Speed Information				
Connected Vehicle Roadside Equipment	Vehicle OBE	speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823				



Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: EU vehicle signage data	Regional Applicability	Australia, European Union
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Intersection infringement	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Intersection infringement	Develop an internationally acceptable ITS application specification that defines the rules for providing intersection infringement information within a local environment.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection infringement info	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - FNTP/M5	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - FNTP/M5	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Work on the upper layer standards related to this solution have not been started.				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection infringement info	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - FNTP/M5	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection infringement info	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	intersection infringement info	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	intersection safety warning	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Intersection infringement	Regional Applicability	Australia, European Union, United States	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	intersection safety warning	EU: DEN Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	EU: DEN Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	EU: DEN Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	EU: DEN Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	intersection safety warning	US: SAE Other J2735 - WAVE WSMP		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	US: SAE Other J2735 - WAVE WSMP		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	US: SAE Other J2735 - WAVE WSMP		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	US: SAE Other J2735 - WAVE WSMP		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: IVI	Develop an ITS application specification for in-vehicle information for each applicable use case.				Australia, European Union	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)		Road closure information can be transmitted with ISO 19321, TPEG2, or DEN Services			
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Queue warning	Develop an ITS application specification for providing queue warnings to vehicles from the roadside or other vehicles that is harmonised with DENM.				United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Connected Vehicle Roadside Equipment	Vehicle OBE	queue warning information	(None-Data) - Local Broadcast Wireless (US)		Work on the upper layer standards related to this solution have not been started.			

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Safety awareness	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Safety awareness	Develop an ITS application specification for vehicle-to-vehicle safety awareness.				United States	
Issue Description:	A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName	Notes			
Emergency Vehicle OBE		Personal Information Device	personal safety warning	US: SAE Safety Awareness Messages - Local Broadcast Wireless (US)	SAE J2945/2 is still under development.			
Emergency Vehicle OBE		Vehicle OBE	emergency vehicle alert	US: SAE Safety Awareness Messages - Local Broadcast Wireless (US)	SAE J2945/2 is still under development.			
Emergency Vehicle OBE		Vehicle OBE	special vehicle type alert	US: SAE Safety Awareness Messages - WAVE WSMP	SAE J2945/2 is still under development.			
Other Vehicle OBEs		Vehicle OBE	vehicle hazard event	US: SAE Safety Awareness Messages - WAVE WSMP	SAE J2945/2 is still under development.			
Vehicle OBE		Other Vehicle OBEs	vehicle hazard event	US: SAE Safety Awareness Messages - WAVE WSMP	SAE J2945/2 is still under development.			
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Signal operations	Develop an internationally acceptable ITS application specification for signal control information to vehicles from the roadside. (i.e., formally standardise ISO 19091)				Australia, European Union, United States	



Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Special vehicle alert	Regional Applicability	Australia, European Union, United States
Class	Timeframe	Proposed Resolution	Description				Regional Applicability
Vehicle-Local	Urgent	V-L: Special vehicle alert	Develop an internationally acceptable ITS application specification for sending special vehicle alerts.				Australia, European Union, United States
Issue Description:	While the indicated standards nominally address the information flow, the design details may not meet performance or other requirements because this particular use case was not the focus of the design effort.						SeverityHigh
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information			
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information			
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information			
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information			

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Special vehicle alert	Regional Applicability	Australia, European Union, United States	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information		
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information		
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information		
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information		
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information		
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information		
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - FNTP/M5		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	US: SAE Other J2735 - WAVE WSMP		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	US: SAE Other J2735 - WAVE WSMP		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	US: SAE Other J2735 - WAVE WSMP		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Stationary vehicle	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Stationary vehicle	Develop an ITS application specification harmonised with DENM for a vehicle to self-report when it is stationary and a potential hazard.				United States	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Other Vehicle OBEs		Vehicle OBE		vehicle hazard event	US: SAE Safety Awareness Messages - WAVE WSMP	Performance characteristics for a vehicle reporting itself as stationary is not defined.		
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	US: SAE Safety Awareness Messages - WAVE WSMP	Performance characteristics for a vehicle reporting itself as stationary is not defined.		
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Trailer information for vehicle location and motion	Standardise the mechanism for the BSM, CAM, and DENM to accurately convey geometric properties related to articulated vehicles.				Australia, European Union, United States	
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Other Vehicle OBEs		Vehicle OBE		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTP/M5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - BTP/GeoNetworking/G5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTP/M5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Other Vehicle OBEs		Vehicle OBE		vehicle location and motion	EU: CA Service - FNTP/M5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTP/M5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - FNTP/M5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	EU: CA Service - FNTP/M5	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Other Vehicle OBEs		Vehicle OBE		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	US: SAE Basic Safety Messages - WAVE WSMP	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		
Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	US: SAE Basic Safety Messages - WAVE WSMP	The standards are ambiguous regarding how trailer information should be detected and conveyed within the BSM		

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: US signal operations	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: US signal operations	Develop an ITS application specification for the performance requirements related to sending signal control information to vehicles from the roadside.				United States	
Issue Description:	A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	US: SAE Signal Control Messages - WAVE WSMP	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev		
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		intersection status	US: SAE Signal Control Messages - WAVE WSMP	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev		
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection status	US: SAE Signal Control Messages - WAVE WSMP	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev		



Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: US signal priority	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: US signal priority	Develop an ITS application specification for the performance requirements related to pre-emption and priority for authorised vehicles at a signal.				United States	
Issue Description:	The performance rules are not defined for this information flow.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment	local signal priority request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE	signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE	signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Connected Vehicle Roadside Equipment	Transit Vehicle OBE	signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Transit Vehicle OBE	Connected Vehicle Roadside Equipment	local signal priority request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Issue Description:	This recommended practice on how to use the related standards is still under development but is not seen as strictly necessary to begin deployment of equipment.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment	local signal priority request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The SAE J2945/11 guidance document is still under development.				
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE	signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The SAE J2945/11 guidance document is still under development.				
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE	signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The SAE J2945/11 guidance document is still under development.				
Connected Vehicle Roadside Equipment	Transit Vehicle OBE	signal priority status	US: SAE Signal Preemption - Local Unicast Wireless (US)	The SAE J2945/11 guidance document is still under development.				
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment	local signal preemption request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The SAE J2945/11 guidance document is still under development.				
Transit Vehicle OBE	Connected Vehicle Roadside Equipment	local signal priority request	US: SAE Signal Preemption - Local Unicast Wireless (US)	The SAE J2945/11 guidance document is still under development.				

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: US traveler information	Regional Applicability	United States
Class	Timeframe	Proposed Resolution	Description				Regional Applicability
Vehicle-Local	Urgent	V-L: US traveler information	Develop an ITS application specification for providing in-vehicle signage and other traveler information to the vehicle from the roadside. This will also need to address issues such as when and how to locally generate traveler information messages and how to sign these messages.				United States
Issue Description:	The standards development organization has established a work item for the subject standard but a draft is not available for this critical feature to enable the interface. The draft may be missing due to the work item being new or simply a lack of activity on the work item.						SeverityHigh
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2945/4 is still under development.			
Connected Vehicle Roadside Equipment	Vehicle OBE	local traveler information	US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2945/4 is still under development.			
Connected Vehicle Roadside Equipment	Vehicle OBE	reduced speed notification	US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2945/4 is still under development.			
Connected Vehicle Roadside Equipment	Vehicle OBE	speed management information	US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2945/4 is still under development.			
Traffic Management Center	Vehicle OBE	speed management information	US: SAE Traveler Info - Mobile Internet (US)	SAE J2945/4 is still under development.			
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						SeverityHigh
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Traffic Management Center	Vehicle OBE	speed management information	US: SAE Traveler Info - Mobile Internet (US)				
Issue Description:	The performance rules are not fully defined for this information flow.						SeverityMedium
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	JP: F-V Short Range Wireless Data(JP) - F-V Short Range Wireless Downlink Comm (JP)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	TPEG2 - Local Broadcast Wireless (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: US work zone information	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: US work zone information	Develop an ITS application specification for providing work zone information to vehicles within a local area. This should be based on the currently defined mechanisms in J3067, TPEG2, IVI, and DENM and assist in the development of an ITS-Wide Data Model.				United States	
Issue Description:	The document may be publicly available but it is not currently available as a formal standard and details may change prior to adoption as a standard.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	work zone information	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	SAE J3067 is only an informational report, not a standard. It is a preliminary resource that may be used to facilitate enhancements and extensions to SAE J2735, but significant technical changes may occur prior to full standardization.				
Maint and Constr Vehicle OBE	Vehicle OBE	work zone information	US: SAE J3067 (J2735 SE) - Local Unicast Wireless (US)	SAE J3067 is only an informational report, not a standard. It is a preliminary resource that may be used to facilitate enhancements and extensions to SAE J2735, but significant technical changes may occur prior to full standardization.				
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Vehicle collision warning	Standardise the complete ITS application specification for exchanging alerts locally that vehicles are about to collide.				European Union	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle collision warning	EU: DEN Service - FNTF/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Vehicle headlight dimming	Develop an ITS application specification for a vehicle to request another vehicle to dim its headlights. NOTE: This analysis should consider whether this information flow is still needed or whether existing market products adequately address this issue.				European Union	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Other Vehicle OBEs	Vehicle OBE	vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Other Vehicle OBEs	vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Vehicle route plan	Develop an internationally acceptable ITS application specification for the use case of providing detailed vehicle route information to the RSE for collection of Vehicle Data for Traffic Operations. This might be combined with V-I: Situation Data.				European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Weather information	Develop an acceptable ITS application specification for providing weather information to vehicles from the roadside or other vehicles. The specification should consider the use of DENM and/or TPEG2 as already implemented in Europe.				United States	
Issue Description:	The standards development organization has established a work item for the subject standard but a draft is not available for this critical feature to enable the interface. The draft may be missing due to the work item being new or simply a lack of activity on the work item.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	road weather advisories	US: SAE Weather Info - Local Broadcast Wireless (US)	A draft of SAE J2945/3 is not yet available.				

Class	Vehicle-Local	Timeframe	Urgent	Proposed Resolution	V-L: Wrong way vehicle detected	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Urgent	V-L: Wrong way vehicle detected	Develop an internationally acceptable ITS application specification for providing distributing wrong way vehicle alerts in real-time.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Other Connected Vehicle Roadside Equipment	Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Other Connected Vehicle Roadside Equipment	Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Other Connected Vehicle Roadside Equipment	Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Other Connected Vehicle Roadside Equipment	Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Other Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Connected Vehicle Roadside Equipment	Vehicle OBE	wrong way vehicle detected	(None-Data) - WAVE WSMP	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Connected Vehicle Roadside Equipment	wrong way vehicle detected	(None-Data) - WAVE WSMP	Work on the upper layer standards related to this solution have not been started.				



Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: Distribute maps	Regional Applicability	Australia, European Union, United States, Japan	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Urgent	C-V: Distribute maps	Develop an internationally acceptable ITS application specification that defines the rules for distributing maps, roadway geometry, and intersection geometry and associated regulations and restrictions over mobile Internet from a centre to user devices (e.g., a vehicle or personal information device).				Australia, European Union, United States, Japan	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Vehicle OBE	Other Vehicle OBEs	vehicle road information	(None-Data) - FNTF/M5	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Other Vehicle OBEs	vehicle road information	(None-Data) - BTP/GeoNetworking/G5	Work on the upper layer standards related to this solution have not been started.				
Other Vehicle OBEs	Vehicle OBE	vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Personal Information Device	map updates	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Vehicle OBE	map updates	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Vehicle OBE	parking facility geometry	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Personal Information Device	map updates	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Vehicle OBE	map updates	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Vehicle OBE	parking facility geometry	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Vehicle OBE	roadway geometry	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Vehicle OBE	vehicle road information	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Map Update System	Vehicle OBE	roadway geometry	US: SAE Signal Control Messages - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Map Update System	Personal Information Device	intersection geometry	US: SAE Signal Control Messages - Mobile Internet (US)					
Map Update System	Vehicle OBE	intersection geometry	US: SAE Signal Control Messages - Mobile Internet (US)					
Issue Description:	A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Map Update System	Personal Information Device	intersection geometry	US: SAE Signal Control Messages - Mobile Internet (US)	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev				
Map Update System	Vehicle OBE	intersection geometry	US: SAE Signal Control Messages - Mobile Internet (US)	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev				
Map Update System	Vehicle OBE	roadway geometry	US: SAE Signal Control Messages - Mobile Internet (US)	The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev				

Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: Distribute maps	Regional Applicability	Australia, European Union, United States, Japan	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Map Update System	Personal Information Device	intersection geometry	EU: Signal Control Messages - Mobile Internet (X.509)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Map Update System	Vehicle OBE	intersection geometry	EU: Signal Control Messages - Mobile Internet (X.509)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Map Update System	Personal Information Device	intersection geometry	US: SAE Signal Control Messages - Mobile Internet (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				
Map Update System	Vehicle OBE	intersection geometry	US: SAE Signal Control Messages - Mobile Internet (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme				

Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: In-vehicle signage	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Urgent	C-V: In-vehicle signage	Develop an ITS application specification for in-vehicle signage to the vehicle from a centre.				Australia, European Union, United States	
Issue Description:	The standards development organization has established a work item for the subject standard but a draft is not available for this critical feature to enable the interface. The draft may be missing due to the work item being new or simply a lack of activity on the work item.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Traffic Management Center	Vehicle OBE	speed management information	US: SAE Traveler Info - Mobile Internet (US)		SAE J2945/4 is still under development.			
Traffic Management Center	Vehicle OBE	vehicle signage data	US: SAE Traveler Info - Mobile Internet (US)		SAE J2945/4 is still under development.			
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Maint and Constr Management Center	Vehicle OBE	work zone information	EU: In-Vehicle Information - Mobile Internet (X.509)		While both IVI and mobile Internet are well defined, there is not an interoperability profile that defines how to pair the two together and address which port numbers to use.			
Traffic Management Center	Vehicle OBE	lane closure information	EU: In-Vehicle Information - Mobile Internet (X.509)		While both IVI and mobile Internet are well defined, there is not an interoperability profile that defines how to pair the two together and address which port numbers to use.			
Traffic Management Center	Vehicle OBE	speed management information	EU: In-Vehicle Information - Mobile Internet (X.509)		While both IVI and mobile Internet are well defined, there is not an interoperability profile that defines how to pair the two together and address which port numbers to use.			
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)		While both IVI and mobile Internet are well defined, there is not an interoperability profile that defines how to pair the two together and address which port numbers to use.			
Traffic Management Center	Vehicle OBE	lane closure information	US: SAE Other J2735 - Mobile Internet (US)		A port number has not been assigned to this message set.			
Traffic Management Center	Vehicle OBE	lane closure information	US: SAE Other J2735 - Mobile Internet (US)		Application-level authentication not provided			

Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: In-vehicle signage	Regional Applicability	Australia, European Union, United States	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Traffic Management Center	Vehicle OBE	speed management information	EU: Contextual Speed Information Service - Mobile Internet (X.509)		Overlap between IVI and Contextual Speed Information			
Traffic Management Center	Vehicle OBE	speed management information	EU: Contextual Speed Information Service - Mobile Internet (X.509)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: DEN Service - Mobile Internet (X.509)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: DEN Service - Mobile Internet (X.509)		Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services			
Traffic Management Center	Vehicle OBE	speed management information	EU: In-Vehicle Information - Mobile Internet (X.509)		Overlap between IVI and Contextual Speed Information			
Traffic Management Center	Vehicle OBE	speed management information	EU: In-Vehicle Information - Mobile Internet (X.509)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)		Overlap between ETSI 102 638 and ISO 14823			
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)		Performance requirements for IVI data transmission are not specified.			
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (US)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (US)		Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (X.509)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (X.509)		Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services			
Issue Description:	Multiple standards have been developed to address this information and it is unclear which standard should be used to address this specific information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (US)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (US)		Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (X.509)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Traffic Management Center	Vehicle OBE	vehicle signage data	TPEG2 - Mobile Internet (X.509)		Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services			



Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: In-vehicle signage	Regional Applicability	Australia, European Union, United States	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Vehicle OBE	lane closure information	EU: DEN Service - Mobile Internet (X.509)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Traffic Management Center	Vehicle OBE	lane closure information	EU: In-Vehicle Information - Mobile Internet (X.509)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Transportation Information Center	Vehicle OBE	broadcast traveler information	TMC - Wide Area Broadcast (Upper)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	TMC - Wide Area Broadcast (Upper)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Traffic Management Center	Vehicle OBE	lane closure information	TPEG2 - Mobile Internet (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Traffic Management Center	Vehicle OBE	lane closure information	TPEG2 - Mobile Internet (X.509)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Transportation Information Center	Vehicle OBE	broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	TPEG2 - Wide Area Broadcast (Upper)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Traffic Management Center	Vehicle OBE	lane closure information	US: SAE Other J2735 - Mobile Internet (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Transportation Information Center	Vehicle OBE	broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				

Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: Signal operations	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Urgent	C-V: Signal operations	Develop an ITS application specification for providing intersection status information to vehicles from a centre for environmental benefits.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Vehicle OBE	intersection status	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Vehicle OBE	intersection status	US: SAE Other J2735 - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Vehicle OBE	intersection status	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.				
Traffic Management Center	Vehicle OBE	intersection status	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided				
Traffic Management Center	Commercial Vehicle OBE	intersection status	US: SAE Signal Control Messages - Mobile Internet (US)					
Traffic Management Center	Emergency Vehicle OBE	intersection status	US: SAE Signal Control Messages - Mobile Internet (US)					
Issue Description:	While the indicated standards nominally address the information flow, the design details may not meet performance or other requirements because this particular use case was not the focus of the design effort.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Commercial Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	The use case of collecting signal timing data within the TMC and then sending to the transit vehicle has not been considered in the development of standards and imposes unique, critical latency issues.				
Traffic Management Center	Emergency Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	The use case of collecting signal timing data within the TMC and then sending to the transit vehicle has not been considered in the development of standards and imposes unique, critical latency issues.				
Traffic Management Center	Transit Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	The use case of collecting signal timing data within the TMC and then sending to the transit vehicle has not been considered in the development of standards and imposes unique, critical latency issues.				
Traffic Management Center	Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	The use case of collecting signal timing data within the TMC and then sending to the transit vehicle has not been considered in the development of standards and imposes unique, critical latency issues.				
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Transit Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	ISO 19091 does not specify the application specification details for intersection status information sent from a TMC to a vehicle				

Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: Signal operations	Regional Applicability	Australia, European Union, United States	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Traffic Management Center	Vehicle OBE	intersection status	(None-Data) - Mobile Internet (X.509)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Traffic Management Center	Vehicle OBE	intersection status	(None-Data) - Mobile Internet (X.509)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Traffic Management Center	Commercial Vehicle OBE	intersection status	AU TRAFF - Mobile Internet (X.509)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Traffic Management Center	Transit Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)		ISO 19091 does not specify the application specification details for intersection status information sent from a TMC to a vehicle			
Traffic Management Center	Transit Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Traffic Management Center	Commercial Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Traffic Management Center	Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Traffic Management Center	Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Traffic Management Center	Vehicle OBE	intersection status	US: SAE Other J2735 - Mobile Internet (US)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages			
Traffic Management Center	Vehicle OBE	intersection status	US: SAE Other J2735 - Mobile Internet (US)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Traffic Management Center	Commercial Vehicle OBE	intersection status	US: SAE Signal Control Messages - Mobile Internet (US)		The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme			
Issue Description:	A draft of the standard has been developed by the working group, but it was still under development at the time the HARTS analysis was performed.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Traffic Management Center	Emergency Vehicle OBE	intersection status	US: SAE Signal Control Messages - Mobile Internet (US)		The conditions under which messages are sent, the rules defining which data fields to populate for each condition, and the latency, accuracy, and performance requirements related to these messages are not fully defined and this document is still under dev			

Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: Situation data		Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description				Regional Applicability	
Vehicle-Centre	Urgent	C-V: Situation data		Develop an internationally acceptable ITS application specification for the use case of distributing collected situation data (e.g., BSMs/CAMs, sensors, probe data, etc.) between vehicles and remote interested parties (e.g., centres).				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.							Severity	Ultra
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle route plan	(None-Data) - Local Unicast Wireless (US)		Work on the upper layer standards related to this solution have not been started.		
Vehicle OBE		Data Distribution System		vehicle situation data	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.							Severity	High
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Vehicle OBE		Transportation Information Center		vehicle environmental data	US: SAE Other J2735 - Mobile Internet (US)		A port number has not been assigned to this message set.		
Vehicle OBE		Transportation Information Center		vehicle environmental data	US: SAE Other J2735 - Mobile Internet (US)		Application-level authentication not provided		
Vehicle OBE		Transportation Information Center		vehicle situation data	US: SAE Other J2735 - Mobile Internet (US)		A port number has not been assigned to this message set.		
Vehicle OBE		Transportation Information Center		vehicle situation data	US: SAE Other J2735 - Mobile Internet (US)		Application-level authentication not provided		
Transportation Information Center		Vehicle OBE		vehicle situation data parameters	US: SAE Other J2735 - Mobile Internet (US)		A port number has not been assigned to this message set.		
Transportation Information Center		Vehicle OBE		vehicle situation data parameters	US: SAE Other J2735 - Mobile Internet (US)		Application-level authentication not provided		
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.							Severity	Medium
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Transportation Information Center		Vehicle OBE		vehicle situation data parameters	EU: Data Probe Management - Mobile Internet (X.509)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Issue Description:	Some of the data elements for this information flow are not fully defined.							Severity	Medium
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	US: NTCIP Transportation Sensors - OMG DDS RPC		Process for converting BSM/probe data into aggregated data and related data specifications (e.g., additional configuration parameters) are not defined.		
Connected Vehicle Roadside Equipment		Traffic Management Center		traffic situation data	US: NTCIP Transportation Sensors - SNMPv3		Process for converting BSM/probe data into aggregated data and related data specifications (e.g., additional configuration parameters) are not defined.		



Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: Situation data	Regional Applicability	Australia, European Union, United States	
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Transportation Information Center	Vehicle OBE	vehicle situation data parameters	EU: Data Probe Management - Mobile Internet (X.509)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Vehicle OBE	Transportation Information Center	vehicle environmental data	EU: DEN Service - Mobile Internet (X.509)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Vehicle OBE	Transportation Information Center	vehicle situation data	EU: Probe Data - Mobile Internet (X.509)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Vehicle OBE	Transportation Information Center	vehicle environmental data	US: SAE Other J2735 - Mobile Internet (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Vehicle OBE	Transportation Information Center	vehicle situation data	US: SAE Other J2735 - Mobile Internet (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle situation data	JP: V-F Short Range Wireless Data (JP) - V-F Short Range Wireless Uplink Comm (JP)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle situation data parameters	US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle situation data	US: SAE Other J2735 - Local Unicast Wireless (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Transportation Information Center	Vehicle OBE	vehicle situation data parameters	US: SAE Other J2735 - Mobile Internet (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages				
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Urgent	C-V: Tailoring of TPEG2	Tailor TPEG2 for use within the US for centre-vehicle communications.				United States	
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Transportation Information Center	Personal Information Device	broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)					
Transportation Information Center	Vehicle OBE	broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)					
Wide Area Information Disseminator	Personal Information Device	wide area broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)					
Wide Area Information Disseminator	Vehicle OBE	broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)					
Wide Area Information Disseminator	Vehicle OBE	wide area broadcast traveler information	US: SAE Other J2735 - Wide Area Broadcast (Upper)					

Class	Vehicle-Centre	Timeframe	Urgent	Proposed Resolution	C-V: Weather information	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Urgent	C-V: Weather information	Update the international ITS application specification to address road weather advisories.				Australia, European Union, United States	
Issue Description:	The standards development organization has established a work item for the subject standard but a draft is not available for this critical feature to enable the interface. The draft may be missing due to the work item being new or simply a lack of activity on the work item.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Transportation Information Center	Vehicle OBE	road weather advisories	US: SAE Weather Info - Mobile Internet (US)		A draft of SAE J2945/3 is not yet available.			
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Transportation Information Center	Vehicle OBE	road weather advisories	TPEG2 - Mobile Internet (US)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Transportation Information Center	Vehicle OBE	road weather advisories	TPEG2 - Mobile Internet (X.509)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini			
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Overlap	Urgent	C-C: ATIS/TMDD/TCIP for parking information	Standardise on a single solution for providing parking information; currently this information is defined within ATIS, TMDD, and TCIP (using alternative approaches).				United States	
Issue Description:	Multiple standards have been developed to address this information and it is unclear which standard should be used to address this specific information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Other Transportation Information Centers	Transportation Information Center	parking information	US: ATIS - NTCIP Messaging		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Parking Management System	Traffic Management Center	parking information	US: ATIS - NTCIP Messaging		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Parking Management System	Transit Management Center	parking information	US: ATIS - NTCIP Messaging		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Parking Management System	Transportation Information Center	parking information	US: ATIS - NTCIP Messaging		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Transportation Information Center	Other Transportation Information Centers	parking information	US: ATIS - NTCIP Messaging		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Other Transportation Information Centers	Transportation Information Center	parking information	US: ATIS - OMG DDS		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Parking Management System	Traffic Management Center	parking information	US: ATIS - OMG DDS		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Parking Management System	Transit Management Center	parking information	US: ATIS - OMG DDS		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Parking Management System	Transportation Information Center	parking information	US: ATIS - OMG DDS		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			
Transportation Information Center	Other Transportation Information Centers	parking information	US: ATIS - OMG DDS		The ATIS, TMDD, and TCIP standards all include parking information; it is unclear which should be used for this information flow.			

Class	Overlap	Timeframe	Urgent	Proposed Resolution	C-C: TCIP/IM/TMDD/ATIS for incident information	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Overlap	Urgent	C-C: TCIP/IM/TMDD/ATIS for incident information	Standardise on a single solution for providing incident and incident management information; currently this information is defined within APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS.				United States	
Issue Description:	Multiple standards have been developed to address this information and it is unclear which standard should be used to address this specific information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Emergency Management Center	Transportation Information Center	incident information	(None-Data) - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				
Emergency Management Center	Other Emergency Management Centers	incident report	US: Incident Management - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				
Transportation Information Center	Other Transportation Information Centers	incident information	US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				
Traffic Management Center	Wide Area Information Disseminator	traffic information for media	US: ATIS - Internet (US)	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				
Traffic Management Center	Media	traffic information for media	US: ATIS - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				
Transportation Information Center	Other Transportation Information Centers	multimodal information	US: ATIS - NTCIP Messaging	The ATIS and TCIP standards both include multimodal schedule information.				
Traffic Management Center	Media	traffic information for media	US: ATIS - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				
Transportation Information Center	Other Transportation Information Centers	multimodal information	US: ATIS - OMG DDS	The ATIS and TCIP standards both include multimodal schedule information.				
Other Emergency Management Centers	Emergency Management Center	incident report	US: Incident Management - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				
Emergency Management Center	Other Emergency Management Centers	incident report	US: Incident Management - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				
Other Emergency Management Centers	Emergency Management Center	incident report	US: Incident Management - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.				

Class	Overlap	Timeframe	Urgent	Proposed Resolution	C-C: TCIP/IM/TMDD/ATIS for incident information	Regional Applicability	United States
Transportation Information Center		Fleet and Freight Management Center		incident information	US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center	Emergency Management Center			incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center		Maint and Constr Management Center		incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Emergency Management Center	Traffic Management Center			incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Emergency Management Center		Transportation Information Center		incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Other Traffic Management Centers	Traffic Management Center			incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Other Transportation Information Centers		Transportation Information Center		incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center	Other Traffic Management Centers			incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center		Transit Management Center		incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center	Transportation Information Center			incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Transportation Information Center		Fleet and Freight Management Center		incident information	US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	C-C: TCIP/IM/TMDD/ATIS for incident information	Regional Applicability	United States
Transportation Information Center	Other Transportation Information Centers		incident information		US: TMDD - NTCIP Messaging	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Emergency Management Center	Traffic Management Center		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Emergency Management Center	Transportation Information Center		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Other Traffic Management Centers	Traffic Management Center		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Other Transportation Information Centers	Transportation Information Center		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center	Emergency Management Center		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center	Maint and Constr Management Center		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center	Other Traffic Management Centers		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center	Transit Management Center		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	
Traffic Management Center	Transportation Information Center		incident information		US: TMDD - OMG DDS	Incident information is defined in: APTA TCIP, IEEE 1512 (IM), ITE TMDD, and SAE ATIS. The standards are unclear when the various standards should be used.	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTTP/M5	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Overlap	Urgent	V-L: BTP/GeoNetworking/G5 and FNTTP/M5	Standardise on a single solution for providing DSRC communications within Europe and Australia; currently BTP/GeoNetworking/G5 and FNTTP/M5 are competing solutions that are not interoperable at the Subnet or Transnet layers.				Australia, European Union	
Issue Description:	Multiple standards have been developed to address this information and it is unclear which standard should be used to address this specific information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Personal Information Device	Vehicle OBE	personal location	(None-Data) - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Vehicle OBE	Connected Vehicle Roadside Equipment	intersection infringement info	(None-Data) - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Vehicle OBE	Other Vehicle OBEs	vehicle road information	(None-Data) - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.				
Connected Vehicle Roadside Equipment	Vehicle OBE	roadway geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven				
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.				
Connected Vehicle Roadside Equipment	Personal Information Device	local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Vehicle OBE	Other Vehicle OBEs	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Personal Information Device	pedestrian safety information	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.				
Connected Vehicle Roadside Equipment	Vehicle OBE	traffic gap information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle payment request	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.				
Other Vehicle OBEs	Vehicle OBE	intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.				

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Other Vehicle OBEs		Vehicle OBE		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs		Vehicle OBE		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Personal Information Device		Connected Vehicle Roadside Equipment		personal location	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Personal Information Device		Connected Vehicle Roadside Equipment		personal location	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Personal Information Device		Connected Vehicle Roadside Equipment		personal location	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Personal Information Device		Connected Vehicle Roadside Equipment		personal location	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Personal Information Device		Vehicle OBE		personal location	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Personal Information Device		Vehicle OBE		personal location	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Personal Information Device		Vehicle OBE		personal location	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Personal Information Device		Vehicle OBE		personal location	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Connected Vehicle Roadside Equipment		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle road information	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle road information	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle road information	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle road information	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle travel time data	(None-Data) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Personal Information Device		pedestrian safety information	(None-Data) - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		traffic gap information	(None-Data) - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(None-Data) - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		intersection infringement info	(None-Data) - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Personal Information Device		Connected Vehicle Roadside Equipment		personal location	(None-Data) - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle travel time data	(None-Data) - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Personal Information Device		location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTTP/M5	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			arriving train information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			local traveler information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			location correction	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			map updates	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			parking facility geometry	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			rail crossing warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
ITS Roadway Equipment	Maint and Constr Vehicle OBE			roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTTP/M5	Regional Applicability	Australia, European Union
ITS Roadway Equipment		Maint and Constr Vehicle OBE		roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		roadway dynamic signage status	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic detector data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		roadway dynamic signage data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		traffic detector control	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs		Vehicle OBE		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs		Vehicle OBE		vehicle road information	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Other Vehicle OBEs		Vehicle OBE		vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs		Vehicle OBE		vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs		Vehicle OBE		vehicle travel time data	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Personal Information Device		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Personal Information Device		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Personal Information Device		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Personal Information Device		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		private location and address flow	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		service response	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		service response	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		service response	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		service response	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle profile	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle headlight dim request	(None-Data) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Commercial Vehicle OBE		Fleet and Freight Management Center		vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTTP/M5	Regional Applicability	Australia, European Union
Commercial Vehicle OBE		Fleet and Freight Management Center		vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE		Fleet and Freight Management Center		vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(Out of Scope) - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle payment request	(Out of Scope) - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle payment information	(Out of Scope) - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		service advertisement	[Null] - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		intersection status monitoring	AU TRAFF - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	AU TRAFF - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	AU TRAFF - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	AU TRAFF - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	AU TRAFF - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	AU TRAFF - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union	
Connected Vehicle Roadside Equipment		Vehicle OBE		work zone information		EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request		EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request		EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request		EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request		EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request		EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request		EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request		EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request		EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Emergency Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Maint and Constr Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE		Vehicle OBE		special vehicle type alert		EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs		Connected Vehicle Roadside Equipment		vehicle location and motion		EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Personal Information Device		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Personal Information Device		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Personal Information Device		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Personal Information Device		vehicle location and motion	EU: CA Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		vehicle control event	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs		Vehicle OBE		vehicle location and motion	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle ID	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle location and motion	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Personal Information Device		vehicle location and motion	EU: CA Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance	EU: CA Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle situation data parameters	EU: Data Probe Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Commercial Vehicle OBE	Fleet and Freight Management Center			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection safety warning	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTP/M5	Regional Applicability	Australia, European Union
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Other Vehicle OBEs	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Other Vehicle OBEs	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Vehicle OBE		Connected Vehicle Roadside Equipment		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Connected Vehicle Roadside Equipment		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		intersection infringement info	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle collision warning	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		vehicle hazard event	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE		Other Vehicle OBEs		wrong way vehicle detected	EU: DEN Service - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Commercial Vehicle OBE		Fleet and Freight Management Center		vehicle environmental data	EU: DEN Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE		Vehicle OBE		special vehicle type alert	EU: DEN Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection safety warning	EU: DEN Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		queue warning information	EU: DEN Service - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTTP/M5	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle collision warning	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			intersection infringement info	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle collision warning	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle hazard event	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			wrong way vehicle detected	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			intersection infringement info	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			wrong way vehicle detected	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			intersection infringement info	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			vehicle collision warning	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			vehicle control event	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			vehicle hazard event	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Other Vehicle OBEs			wrong way vehicle detected	EU: DEN Service - FNTTP/M5	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			queue warning information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTP/M5	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road weather advisories	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Other Vehicle OBEs	Vehicle OBE			vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTP/M5	Regional Applicability	Australia, European Union
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			
Connected Vehicle Roadside Equipment	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.			
Connected Vehicle Roadside Equipment	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).			
Connected Vehicle Roadside Equipment	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.			
Connected Vehicle Roadside Equipment	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.			
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).			
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.			
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			
Connected Vehicle Roadside Equipment	Vehicle OBE	current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.			
Connected Vehicle Roadside Equipment	Vehicle OBE	current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).			
Connected Vehicle Roadside Equipment	Vehicle OBE	current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.			
Connected Vehicle Roadside Equipment	Vehicle OBE	current charging status	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			
Connected Vehicle Roadside Equipment	Vehicle OBE	electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.			
Connected Vehicle Roadside Equipment	Vehicle OBE	electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).			
Connected Vehicle Roadside Equipment	Vehicle OBE	electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.			
Connected Vehicle Roadside Equipment	Vehicle OBE	electric charging services inventory	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTP/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.			
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle charging profile	EU: Electric Charging Hot Spot - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			current charging status	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle charging profile	EU: Electric Charging Management - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			reduced speed notification	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Maint and Constr Vehicle OBE	Vehicle OBE			work zone information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle situation data	EU: Probe Data - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	GeoNetworking multi-hop has not been proven in wide-scale deployments using 5.9 GHz channels.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	Security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE			intersection status	EU: Signal Control Messages - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE			intersection status	EU: Signal Control Messages - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment			intersection status monitoring	EU: Signal Control Messages - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE			intersection status	EU: Signal Control Messages - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment	Vehicle OBE			intersection status	EU: Signal Control Messages - FNTF/M5	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment			local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE		signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE		signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Personal Information Device		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Personal Information Device		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Personal Information Device		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Personal Information Device		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment		local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).	
Transit Vehicle OBE		Connected Vehicle Roadside Equipment		local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTF/M5	Regional Applicability	Australia, European Union
Transit Vehicle OBE	Connected Vehicle Roadside Equipment		local signal priority request		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven	
Connected Vehicle Roadside Equipment	Vehicle OBE	parking availability		EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Connected Vehicle Roadside Equipment	Vehicle OBE	parking availability		EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Connected Vehicle Roadside Equipment	Vehicle OBE	parking availability		EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Connected Vehicle Roadside Equipment	Vehicle OBE	parking availability		EU: TPEG2 Parking Information - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information		TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information		TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information		TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information		TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information		TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information		TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information		TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information		TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Connected Vehicle Roadside Equipment	Vehicle OBE	road weather advisories		TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Connected Vehicle Roadside Equipment	Vehicle OBE	road weather advisories		TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Connected Vehicle Roadside Equipment	Vehicle OBE	road weather advisories		TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Connected Vehicle Roadside Equipment	Vehicle OBE	road weather advisories		TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.		
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data		TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven		
Maint and Constr Vehicle OBE	Vehicle OBE	work zone information		TPEG2 - Local Broadcast Wireless (AU/EU)	BTP/G5 and FNTF/M5 are competing standards due to differences in EPD vs LPD and Geonetworking.		
Maint and Constr Vehicle OBE	Vehicle OBE	work zone information		TPEG2 - Local Broadcast Wireless (AU/EU)	Geonetworking security is inadequate for multi-hop and where the generator of a message is not the same of the broadcaster of the message (e.g., a message generated by a central system and sent to the RSE for transmission).		

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: BTP/GeoNetworking/G5 and FNTTP/M5	Regional Applicability	Australia, European Union
Maint and Constr Vehicle OBE	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The ETSI 102 890 service announcement is not interoperable with the IEEE 1609.3 WSA or ISO 22418 FSAP.			
Maint and Constr Vehicle OBE	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	The mechanism by which trust is revoked from misbehaving actors has not been proven			

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: CAM and DENM	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Overlap	Urgent	V-L: CAM and DENM	Standardise on a single solution for providing vehicle event information; currently this information can be transmitted using CAM or DENM.				Australia, European Union	
Issue Description:	The performance rules are not defined for this information flow.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Commercial Vehicle OBE	Fleet and Freight Management Center	vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Commercial Vehicle OBE	Fleet and Freight Management Center	vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Commercial Vehicle OBE	Fleet and Freight Management Center	vehicle environmental data	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Commercial Vehicle OBE	Fleet and Freight Management Center	vehicle environmental data	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Other Vehicle OBEs	Vehicle OBE	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Other Vehicle OBEs	vehicle environmental data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Transportation Information Center	vehicle environmental data	EU: DEN Service - Mobile Internet (X.509)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Vehicle OBE	Transportation Information Center	vehicle environmental data	EU: DEN Service - Mobile Internet (X.509)	Unclear rules on when to send CAM vs. DENM for this information				



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: CAM and DENM	Regional Applicability	Australia, European Union	
Issue Description:	Multiple standards have been developed to address this information and it is unclear which standard should be used to address this specific information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle control event	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information				
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Other Vehicle OBEs	Vehicle OBE	vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Transit Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Other Vehicle OBEs	vehicle control event	EU: CA Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information				
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Commercial Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information				
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Emergency Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information				
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Maint and Constr Vehicle OBE	Vehicle OBE	special vehicle type alert	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information				
Other Vehicle OBEs	Vehicle OBE	vehicle control event	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information				
Vehicle OBE	Other Vehicle OBEs	vehicle control event	EU: CA Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information				

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: CAM and DENM	Regional Applicability	Australia, European Union
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information	
Vehicle OBE	Other Vehicle OBEs			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Other Vehicle OBEs			vehicle control event	EU: DEN Service - BTP/GeoNetworking/G5	Unclear rules on when to send CAM vs. DENM for this information	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Commercial Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Emergency Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Maint and Constr Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Other Vehicle OBEs	Vehicle OBE			vehicle control event	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Transit Vehicle OBE	Vehicle OBE			special vehicle type alert	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: DEN Service - FNTM/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE	Connected Vehicle Roadside Equipment			vehicle control event	EU: DEN Service - FNTM/M5	Unclear rules on when to send CAM vs. DENM for this information	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-L: CAM and DENM	Regional Applicability	Australia, European Union	
Vehicle OBE		Other Vehicle OBEs		vehicle control event		EU: DEN Service - FNTP/M5	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Vehicle OBE		Other Vehicle OBEs		vehicle control event		EU: DEN Service - FNTP/M5	Unclear rules on when to send CAM vs. DENM for this information	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Overlap	Urgent	V-L: CAM and SRM	Standardise on a single solution for requesting signal priority; currently this request can be transmitted using CAM or SRM.				Australia, European Union	
Issue Description:	Multiple standards have been developed to address this information and it is unclear which standard should be used to address this specific information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName		Notes		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: CA Service - BTP/GeoNetworking/G5		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: CA Service - BTP/GeoNetworking/G5		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - BTP/GeoNetworking/G5		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - BTP/GeoNetworking/G5		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: CA Service - FNTP/M5		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: CA Service - FNTP/M5		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - FNTP/M5		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - FNTP/M5		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: CA Service - Local Broadcast Wireless (AU/EU)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - CEN 5.8Ghz DSRC		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - CEN 5.8Ghz DSRC		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		
Transit Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		ISO 19091 does not give clear guidelines on when CAM should be used vs SRM		
Transit Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-X: DENM, IVI, TPEG2, TMC and Contextual Speed Information	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Overlap	Urgent	V-X: DENM, IVI, TPEG2, TMC and Contextual Speed Information	Standardise on a single solution for providing traveler information, lane closure information and speed information; currently this information can be sent via DENM, IVI, TPEG2, TMC, or Contextual Speed Information (speed information only). Use cases need to consider the various environments (e.g., Centre-Vehicle, Roadside-Vehicle, Special Vehicle-Vehicle, etc).				Australia, European Union	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Transportation Information Center	Vehicle OBE	road weather advisories	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.			
Transportation Information Center	Vehicle OBE	road weather advisories	TPEG2 - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.			
Transportation Information Center	Vehicle OBE	road weather advisories	TPEG2 - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.			
Transportation Information Center	Vehicle OBE	road weather advisories	US: SAE Weather Info - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.			
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Maint and Constr Management Center	Vehicle OBE	work zone information	EU: DEN Service - Mobile Internet (X.509)		While both DEN and mobile Internet are well defined, there is no an interoperability profile that defines how to pair the two together and address which port numbers to use and how to identify the center to which the information should be sent.			
Traffic Management Center	Vehicle OBE	lane closure information	EU: DEN Service - Mobile Internet (X.509)		While both DEN and mobile Internet are well defined, there is no an interoperability profile that defines how to pair the two together and address which port numbers to use and how to identify the center to which the information should be sent.			
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: DEN Service - Mobile Internet (X.509)		While both DEN and mobile Internet are well defined, there is no an interoperability profile that defines how to pair the two together and address which port numbers to use and how to identify the center to which the information should be sent.			
Vehicle OBE	Transportation Information Center	vehicle environmental data	EU: DEN Service - Mobile Internet (X.509)		While both DEN and mobile Internet are well defined, there is no an interoperability profile that defines how to pair the two together and address which port numbers to use and how to identify the center to which the information should be sent.			



Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-X: DENM, IVI, TPEG2, TMC and Contextual Speed Information	Regional Applicability	Australia, European Union	
Issue Description:	Multiple standards have been developed to address this information and it is unclear which standard should be used to address this specific information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	Overlap between IVI and Contextual Speed Information				
Connected Vehicle Roadside Equipment	Vehicle OBE	speed management information	EU: Contextual Speed Information Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Traffic Management Center	Vehicle OBE	speed management information	EU: Contextual Speed Information Service - Mobile Internet (X.509)	Overlap between IVI and Contextual Speed Information				
Traffic Management Center	Vehicle OBE	speed management information	EU: Contextual Speed Information Service - Mobile Internet (X.509)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Lane closure information can be transmitted with ISO 19321, TPEG2, or DEN Services				
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Road closure information can be transmitted with ISO 19321, TPEG2, or DEN Services				
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Connected Vehicle Roadside Equipment	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services				
Emergency Vehicle OBE	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Vehicle signage data can be transmitted with ISO 19321 or DEN Services (V2V)				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Maint and Constr Vehicle OBE	Vehicle OBE	vehicle signage data	EU: DEN Service - Local Broadcast Wireless (AU/EU)	Vehicle signage data can be transmitted with ISO 19321 or DEN Services (V2V)				
Connected Vehicle Roadside Equipment	Vehicle OBE	work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.				
Traffic Management Center	Vehicle OBE	lane closure information	EU: DEN Service - Mobile Internet (X.509)	Lane closure information can be transmitted with ISO 19321, TPEG2, or DEN Services				
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: DEN Service - Mobile Internet (X.509)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				
Traffic Management Center	Vehicle OBE	vehicle signage data	EU: DEN Service - Mobile Internet (X.509)	Vehicle signage data can be transmitted with ISO 19321, TPEG2, or DEN Services				
Connected Vehicle Roadside Equipment	Vehicle OBE	lane closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Lane closure information can be transmitted with ISO 19321, TPEG2, or DEN Services				
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Road closure information can be transmitted with ISO 19321, TPEG2, or DEN Services				
Connected Vehicle Roadside Equipment	Vehicle OBE	road closure information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini				

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-X: DENM, IVI, TPEG2, TMC and Contextual Speed Information	Regional Applicability	Australia, European Union
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between IVI and Contextual Speed Information	
Connected Vehicle Roadside Equipment	Vehicle OBE			speed management information	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.	
Connected Vehicle Roadside Equipment	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Overlap between ETSI 102 638 and ISO 14823	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	Performance requirements for IVI data transmission are not specified.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Traffic Management Center	Vehicle OBE			lane closure information	EU: In-Vehicle Information - Mobile Internet (X.509)	Lane closure information can be transmitted with ISO 19321, TPEG2, or DEN Services	
Traffic Management Center	Vehicle OBE			speed management information	EU: In-Vehicle Information - Mobile Internet (X.509)	Overlap between IVI and Contextual Speed Information	
Traffic Management Center	Vehicle OBE			speed management information	EU: In-Vehicle Information - Mobile Internet (X.509)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Traffic Management Center	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)	Overlap between ETSI 102 638 and ISO 14823	
Traffic Management Center	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)	Performance requirements for IVI data transmission are not specified.	
Traffic Management Center	Vehicle OBE			vehicle signage data	EU: In-Vehicle Information - Mobile Internet (X.509)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Lane closure information can be transmitted with ISO 19321, TPEG2, or DEN Services	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Road closure information can be transmitted with ISO 19321, TPEG2, or DEN Services	
Connected Vehicle Roadside Equipment	Vehicle OBE			road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Emergency Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.	
Maint and Constr Vehicle OBE	Vehicle OBE			vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.	
Connected Vehicle Roadside Equipment	Vehicle OBE			lane closure information	TPEG2 - Local Broadcast Wireless (US)	Lane closure information can be transmitted with ISO 19321, TPEG2, or DEN Services	

Class	Overlap	Timeframe	Urgent	Proposed Resolution	V-X: DENM, IVI, TPEG2, TMC and Contextual Speed Information	Regional Applicability	Australia, European Union		
Traffic Management Center		Vehicle OBE		lane closure information		TPEG2 - Mobile Internet (US)		Lane closure information can be transmitted with ISO 19321, TPEG2, or DEN Services	
Traffic Management Center		Vehicle OBE		lane closure information		TPEG2 - Mobile Internet (X.509)		Lane closure information can be transmitted with ISO 19321, TPEG2, or DEN Services	
Class	Timeframe	Proposed Resolution	Description					Regional Applicability	
Foundational	Near-term	Object registration and discovery	Investigate mechanisms to register and discover objects within the ITS network.					Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.							Severity	Ultra
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Center		Object Registration and Discovery Service		object registration	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Object Registration and Discovery Service		object registration	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Data Distribution System		Object Registration and Discovery Service		object registration	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Object Registration and Discovery Service		Center		object discovery	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Object Registration and Discovery Service		Connected Vehicle Roadside Equipment		object discovery	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Object Registration and Discovery Service		Data Distribution System		object discovery	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Object Registration and Discovery Service		Wide Area Information Disseminator		object discovery	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Wide Area Information Disseminator		Object Registration and Discovery Service		object registration	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Object Registration and Discovery Service		Personal Information Device		object discovery	(None-Data) - Guaranteed Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Object Registration and Discovery Service		Vehicle OBE		object discovery	(None-Data) - Guaranteed Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Object Registration and Discovery Service		Wide Area Information Disseminator		object discovery	(None-Data) - Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Wide Area Information Disseminator		Object Registration and Discovery Service		object registration	(None-Data) - Internet (US)		Work on the upper layer standards related to this solution have not been started.		

Class	Foundational	Timeframe	Near-term	Proposed Resolution	Updates for data distribution (critical flows)	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Foundational	Near-term	Updates for data distribution (critical flows)	Update data dictionary standards to conform to the chosen Data Distribution Technology for those interfaces where this technology might be appropriate. This may include updates to standards such as: TMDD, TCIP, J2735, NTICP, etc. (i.e., this would potentially convert ASN.1 data into the format that is native to the chosen DDT.)				United States	
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Transportation Information Center	Emergency Management Center	corridor operational strategies	DDS: TMDD - OMG DDS					
Transportation Information Center	Emergency Management Center	road network conditions	DDS: TMDD - OMG DDS					
Transportation Information Center	Emergency Management Center	road weather advisories	DDS: TMDD - OMG DDS					
Transportation Information Center	Emissions Management Center	corridor operational strategies	DDS: TMDD - OMG DDS					
Transportation Information Center	Fleet and Freight Management Center	incident information	DDS: TMDD - OMG DDS					
Transportation Information Center	Fleet and Freight Management Center	road network conditions	DDS: TMDD - OMG DDS					
Connected Vehicle Roadside Equipment	ITS Roadway Equipment	roadway dynamic signage data	DDS: NTCIP Message Sign - OMG DDS RPC					
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	ITS roadway equipment information	DDS: NTCIP Message Sign - OMG DDS RPC					
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	roadway dynamic signage status	DDS: NTCIP Message Sign - OMG DDS RPC					
ITS Roadway Equipment	Maint and Constr Management Center	roadway dynamic signage status	DDS: NTCIP Message Sign - OMG DDS RPC					
ITS Roadway Equipment	Other ITS Roadway Equipment	dynamic sign coordination	DDS: NTCIP Message Sign - OMG DDS RPC					
ITS Roadway Equipment	Traffic Management Center	roadway dynamic signage status	DDS: NTCIP Message Sign - OMG DDS RPC					
ITS Roadway Equipment	Traffic Management Center	roadway warning system status	DDS: NTCIP Message Sign - OMG DDS RPC					
ITS Roadway Equipment	Traffic Management Center	variable speed limit status	DDS: NTCIP Message Sign - OMG DDS RPC					
Maint and Constr Management Center	ITS Roadway Equipment	roadway dynamic signage data	DDS: NTCIP Message Sign - OMG DDS RPC					
Emergency Management Center	Traffic Management Center	emergency traffic control request	DDS: TMDD - OMG DDS					
Emergency Management Center	Traffic Management Center	incident information	DDS: TMDD - OMG DDS					
Emergency Management Center	Transportation Information Center	incident information	DDS: TMDD - OMG DDS					
Emissions Management Center	Transportation Information Center	air quality information	DDS: TMDD - OMG DDS					
Fleet and Freight Management Center	Commercial Vehicle Administration Center	route restrictions	DDS: TMDD - OMG DDS					
Maint and Constr Management Center	Center	equipment maintenance status	DDS: TMDD - OMG DDS					
Maint and Constr Management Center	Commercial Vehicle Administration Center	current infrastructure restrictions	DDS: TMDD - OMG DDS					
Maint and Constr Management Center	Emergency Management Center	road weather information	DDS: TMDD - OMG DDS					
Maint and Constr Management Center	Map Update System	current infrastructure restrictions	DDS: TMDD - OMG DDS					
Maint and Constr Management Center	Surface Transportation Weather Service	road weather information	DDS: TMDD - OMG DDS					
ITS Roadway Equipment	Maint and Constr Management Center	traffic images	DDS: NTCIP CCTV - OMG DDS RPC					
ITS Roadway Equipment	Traffic Management Center	traffic images	DDS: NTCIP CCTV - OMG DDS RPC					
Maint and Constr Management Center	ITS Roadway Equipment	video surveillance control	DDS: NTCIP CCTV - OMG DDS RPC					
Traffic Management Center	ITS Roadway Equipment	video surveillance control	DDS: NTCIP CCTV - OMG DDS RPC					
Connected Vehicle Roadside Equipment	Emissions Management Center	emissions situation data	DDS: NTCIP Environmental Sensors - OMG DDS RPC					



Class	Foundational	Timeframe	Near-term	Proposed Resolution	Updates for data distribution (critical flows)	Regional Applicability	United States
Emissions Management Center		ITS Roadway Equipment		air quality sensor control		DDS: NTCIP Environmental Sensors - OMG DDS RPC	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		environmental sensor data		DDS: NTCIP Environmental Sensors - OMG DDS RPC	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information		DDS: NTCIP Environmental Sensors - OMG DDS RPC	
ITS Roadway Equipment		Emissions Management Center		air quality sensor data		DDS: NTCIP Environmental Sensors - OMG DDS RPC	
ITS Roadway Equipment		Maint and Constr Management Center		environmental sensor data		DDS: NTCIP Environmental Sensors - OMG DDS RPC	
ITS Roadway Equipment		Traffic Management Center		environmental sensor data		DDS: NTCIP Environmental Sensors - OMG DDS RPC	
Maint and Constr Management Center		ITS Roadway Equipment		environmental sensors control		DDS: NTCIP Environmental Sensors - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		environmental sensors control		DDS: NTCIP Environmental Sensors - OMG DDS RPC	
Other ITS Roadway Equipment		ITS Roadway Equipment		dynamic sign coordination		DDS: NTCIP Message Sign - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		lane management control		DDS: NTCIP Message Sign - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		roadway dynamic signage data		DDS: NTCIP Message Sign - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		roadway warning system control		DDS: NTCIP Message Sign - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		variable speed limit control		DDS: NTCIP Message Sign - OMG DDS RPC	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal preemption request		DDS: NTCIP Signal Priority - OMG DDS RPC	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal priority service request		DDS: NTCIP Signal Priority - OMG DDS RPC	
ITS Roadway Equipment		Traffic Management Center		right-of-way request notification		DDS: NTCIP Signal Priority - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		signal control commands		DDS: NTCIP Signal System Masters - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		signal control device configuration		DDS: NTCIP Signal System Masters - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		signal system configuration		DDS: NTCIP Signal System Masters - OMG DDS RPC	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		pedestrian location information		DDS: NTCIP Traffic Signal - OMG DDS RPC	
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		signal service request		DDS: NTCIP Traffic Signal - OMG DDS RPC	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		conflict monitor status		DDS: NTCIP Traffic Signal - OMG DDS RPC	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		intersection control status		DDS: NTCIP Traffic Signal - OMG DDS RPC	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		ITS roadway equipment information		DDS: NTCIP Traffic Signal - OMG DDS RPC	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status		DDS: NTCIP Traffic Signal - OMG DDS RPC	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control coordination		DDS: NTCIP Traffic Signal - OMG DDS RPC	
ITS Roadway Equipment		Other ITS Roadway Equipment		signal control data		DDS: NTCIP Traffic Signal - OMG DDS RPC	
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status		DDS: NTCIP Traffic Signal - OMG DDS RPC	
ITS Roadway Equipment		Traffic Management Center		signal control status		DDS: NTCIP Traffic Signal - OMG DDS RPC	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control coordination		DDS: NTCIP Traffic Signal - OMG DDS RPC	
Other ITS Roadway Equipment		ITS Roadway Equipment		signal control data		DDS: NTCIP Traffic Signal - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control		DDS: NTCIP Traffic Signal - OMG DDS RPC	
Traffic Management Center		ITS Roadway Equipment		signal control plans		DDS: NTCIP Traffic Signal - OMG DDS RPC	

Class	Foundational	Timeframe	Near-term	Proposed Resolution	Updates for data distribution (critical flows)	Regional Applicability	United States
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		traffic situation data	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
Connected Vehicle Roadside Equipment	Traffic Management Center		traffic situation data	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
Connected Vehicle Roadside Equipment	Transportation Information Center		traffic situation data	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
ITS Roadway Equipment	Maint and Constr Management Center		speed monitoring information	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
ITS Roadway Equipment	Maint and Constr Management Center		traffic detector data	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
ITS Roadway Equipment	Other ITS Roadway Equipment		roadway detector coordination	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
ITS Roadway Equipment	Traffic Management Center		speed monitoring information	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
ITS Roadway Equipment	Traffic Management Center		traffic detector data	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
Maint and Constr Management Center	ITS Roadway Equipment		speed monitoring control	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
Maint and Constr Management Center	ITS Roadway Equipment		traffic detector control	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
Other ITS Roadway Equipment	ITS Roadway Equipment		roadway detector coordination	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
Traffic Management Center	ITS Roadway Equipment		speed monitoring control	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
Traffic Management Center	ITS Roadway Equipment		traffic detector control	DDS: NTCIP Transportation Sensors -	OMG DDS RPC		
Alternate Mode Transportation Center	Transit Management Center		multimodal service data	DDS: TCIP -	OMG DDS		
Alternate Mode Transportation Center	Transit Management Center		service information response	DDS: TCIP -	OMG DDS		
Alternate Mode Transportation Center	Transportation Information Center		multimodal service data	DDS: TCIP -	OMG DDS		
Emergency Management Center	Transit Management Center		emergency transit service request	DDS: TCIP -	OMG DDS		
Other Transit Management Centers	Transit Management Center		transit service coordination	DDS: TCIP -	OMG DDS		
Other Transportation Information Centers	Transportation Information Center		transit service information	DDS: TCIP -	OMG DDS		
Traffic Management Center	Transit Management Center		transit service change request	DDS: TCIP -	OMG DDS		
Traffic Management Center	Transportation Information Center		transit service change request	DDS: TCIP -	OMG DDS		
Transit Management Center	Alternate Mode Transportation Center		service information request	DDS: TCIP -	OMG DDS		
Transit Management Center	Alternate Mode Transportation Center		transit multimodal information	DDS: TCIP -	OMG DDS		
Transit Management Center	Emergency Management Center		emergency transit service response	DDS: TCIP -	OMG DDS		
Transit Management Center	Emissions Management Center		transit and fare schedules	DDS: TCIP -	OMG DDS		
Transit Management Center	Other Transit Management Centers		transit service coordination	DDS: TCIP -	OMG DDS		
Transit Management Center	Parking Management System		transit schedule adherence information	DDS: TCIP -	OMG DDS		
Transit Management Center	Parking Management System		transit schedule information	DDS: TCIP -	OMG DDS		
Transit Management Center	Traffic Management Center		traffic control priority request	DDS: TCIP -	OMG DDS		
Transit Management Center	Traffic Management Center		transit system data	DDS: TCIP -	OMG DDS		

Class	Foundational	Timeframe	Near-term	Proposed Resolution	Updates for data distribution (critical flows)	Regional Applicability	United States
Transit Management Center		Transportation Information Center		demand responsive transit plan	DDS: TCIP - OMG DDS		
Transit Management Center		Transportation Information Center		emergency transit schedule information	DDS: TCIP - OMG DDS		
Transit Management Center		Transportation Information Center		transit and fare schedules	DDS: TCIP - OMG DDS		
Transit Management Center		Transportation Information Center		transit incident information	DDS: TCIP - OMG DDS		
Transit Management Center		Transportation Information Center		transit schedule adherence information	DDS: TCIP - OMG DDS		
Transit Management Center		Transportation Information Center		transit trip plan	DDS: TCIP - OMG DDS		
Transportation Information Center		Alternate Mode Transportation Center		service information request	DDS: TCIP - OMG DDS		
Transportation Information Center		Other Transportation Information Centers		transit service information	DDS: TCIP - OMG DDS		
Transportation Information Center		Transit Management Center		demand responsive transit request	DDS: TCIP - OMG DDS		
Transportation Information Center		Transit Management Center		transit service change request	DDS: TCIP - OMG DDS		
Border Inspection System		Traffic Management Center		border wait times data	DDS: TMDD - OMG DDS		
Border Inspection System		Transportation Information Center		border crossing status information	DDS: TMDD - OMG DDS		
Center		Archived Data Center		center archive data	DDS: TMDD - OMG DDS		
Center		Data Distribution System		operational data	DDS: TMDD - OMG DDS		
Center		Data Distribution System		traveler information distribution data	DDS: TMDD - OMG DDS		
Center		Maint and Constr Management Center		equipment maintenance request	DDS: TMDD - OMG DDS		
Commercial Vehicle Administration Center		Fleet and Freight Management Center		route restrictions	DDS: TMDD - OMG DDS		
Commercial Vehicle Administration Center		Other CV Administration Centers		route restrictions	DDS: TMDD - OMG DDS		
Commercial Vehicle Administration Center		Transportation Information Center		route restrictions	DDS: TMDD - OMG DDS		
Data Distribution System		Center		operational data	DDS: TMDD - OMG DDS		
Data Distribution System		Center		regional situation data	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Traffic Management Center		current infrastructure restrictions	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Traffic Management Center		environmental conditions data	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Traffic Management Center		equipment maintenance status	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Traffic Management Center		work zone information	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Transit Management Center		current infrastructure restrictions	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Transportation Information Center		current infrastructure restrictions	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Transportation Information Center		environmental conditions data	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Transportation Information Center		maint and constr work plans	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Transportation Information Center		road weather information	DDS: TMDD - OMG DDS		
Maint and Constr Management Center		Transportation Information Center		work zone information	DDS: TMDD - OMG DDS		
Other CV Administration Centers		Commercial Vehicle Administration Center		route restrictions	DDS: TMDD - OMG DDS		
Other Traffic Management Centers		Traffic Management Center		device control request	DDS: TMDD - OMG DDS		
Other Traffic Management Centers		Traffic Management Center		device data	DDS: TMDD - OMG DDS		
Other Traffic Management Centers		Traffic Management Center		device status	DDS: TMDD - OMG DDS		
Other Traffic Management Centers		Traffic Management Center		incident information	DDS: TMDD - OMG DDS		
Other Traffic Management Centers		Traffic Management Center		road network conditions	DDS: TMDD - OMG DDS		
Other Traffic Management Centers		Traffic Management Center		traffic image meta data	DDS: TMDD - OMG DDS		

Class	Foundational	Timeframe	Near-term	Proposed Resolution	Updates for data distribution (critical flows)	Regional Applicability	United States
Other Traffic Management Centers	Traffic Management Center		traffic images		DDS: TMDD - OMG DDS		
Other Transportation Information Centers	Transportation Information Center		emergency traveler information		DDS: TMDD - OMG DDS		
Other Transportation Information Centers	Transportation Information Center		incident information		DDS: TMDD - OMG DDS		
Other Transportation Information Centers	Transportation Information Center		road network conditions		DDS: TMDD - OMG DDS		
Other Transportation Information Centers	Transportation Information Center		traffic image meta data		DDS: TMDD - OMG DDS		
Other Transportation Information Centers	Transportation Information Center		traffic images		DDS: TMDD - OMG DDS		
Service Monitor System	Center		RSE fault data		DDS: TMDD - OMG DDS		
Service Monitor System	Maint and Constr Management Center		RSE fault data		DDS: TMDD - OMG DDS		
Surface Transportation Weather Service	Emergency Management Center		transportation weather information		DDS: TMDD - OMG DDS		
Surface Transportation Weather Service	Maint and Constr Management Center		transportation weather information		DDS: TMDD - OMG DDS		
Surface Transportation Weather Service	Traffic Management Center		transportation weather information		DDS: TMDD - OMG DDS		
Surface Transportation Weather Service	Transportation Information Center		transportation weather information		DDS: TMDD - OMG DDS		
Traffic Management Center	Emergency Management Center		emergency traffic control information		DDS: TMDD - OMG DDS		
Traffic Management Center	Emergency Management Center		incident information		DDS: TMDD - OMG DDS		
Traffic Management Center	Emergency Management Center		road network conditions		DDS: TMDD - OMG DDS		
Traffic Management Center	Emissions Management Center		road network conditions		DDS: TMDD - OMG DDS		
Traffic Management Center	Fleet and Freight Management Center		road network conditions		DDS: TMDD - OMG DDS		
Traffic Management Center	Fleet and Freight Management Center		route restrictions		DDS: TMDD - OMG DDS		
Traffic Management Center	Maint and Constr Management Center		equipment maintenance request		DDS: TMDD - OMG DDS		
Traffic Management Center	Maint and Constr Management Center		field equipment status		DDS: TMDD - OMG DDS		
Traffic Management Center	Maint and Constr Management Center		incident information		DDS: TMDD - OMG DDS		
Traffic Management Center	Maint and Constr Management Center		road network conditions		DDS: TMDD - OMG DDS		
Traffic Management Center	Other Traffic Management Centers		device control request		DDS: TMDD - OMG DDS		
Traffic Management Center	Other Traffic Management Centers		device data		DDS: TMDD - OMG DDS		
Traffic Management Center	Other Traffic Management Centers		device status		DDS: TMDD - OMG DDS		
Traffic Management Center	Other Traffic Management Centers		incident information		DDS: TMDD - OMG DDS		
Traffic Management Center	Other Traffic Management Centers		road network conditions		DDS: TMDD - OMG DDS		
Traffic Management Center	Other Traffic Management Centers		traffic image meta data		DDS: TMDD - OMG DDS		
Traffic Management Center	Other Traffic Management Centers		traffic images		DDS: TMDD - OMG DDS		
Traffic Management Center	Transit Management Center		incident information		DDS: TMDD - OMG DDS		
Traffic Management Center	Transit Management Center		road network conditions		DDS: TMDD - OMG DDS		
Traffic Management Center	Transportation Information Center		incident information		DDS: TMDD - OMG DDS		
Traffic Management Center	Transportation Information Center		regional situation data		DDS: TMDD - OMG DDS		
Traffic Management Center	Transportation Information Center		road network conditions		DDS: TMDD - OMG DDS		
Traffic Management Center	Transportation Information Center		traffic control information		DDS: TMDD - OMG DDS		
Traffic Management Center	Transportation Information Center		traffic image meta data		DDS: TMDD - OMG DDS		
Traffic Management Center	Transportation Information Center		traffic images		DDS: TMDD - OMG DDS		
Transportation Information Center	Archived Data Center		regional situation data		DDS: TMDD - OMG DDS		



Class	Foundational	Timeframe	Near-term	Proposed Resolution	Updates for data distribution (critical flows)		Regional Applicability	United States	
Transportation Information Center		Fleet and Freight Management Center		road weather advisories		DDS: TMDD - OMG DDS			
Transportation Information Center		Maint and Constr Management Center		corridor operational strategies		DDS: TMDD - OMG DDS			
Transportation Information Center		Other Transportation Information Centers		emergency traveler information		DDS: TMDD - OMG DDS			
Transportation Information Center		Other Transportation Information Centers		incident information		DDS: TMDD - OMG DDS			
Transportation Information Center		Other Transportation Information Centers		road network conditions		DDS: TMDD - OMG DDS			
Transportation Information Center		Other Transportation Information Centers		traffic image meta data		DDS: TMDD - OMG DDS			
Transportation Information Center		Other Transportation Information Centers		traffic images		DDS: TMDD - OMG DDS			
Transportation Information Center		Traffic Management Center		corridor operational strategies		DDS: TMDD - OMG DDS			
Transportation Information Center		Traffic Management Center		regional situation data		DDS: TMDD - OMG DDS			
Transportation Information Center		Transit Management Center		corridor operational strategies		DDS: TMDD - OMG DDS			
Tunnel Management System		Maint and Constr Management Center		field equipment status		DDS: TMDD - OMG DDS			
Connected Vehicle Roadside Equipment		Field Support Equipment		RSE status		US: NTCIP Generic Objects - OMG DDS RPC			
Connected Vehicle Roadside Equipment		Service Monitor System		RSE status		US: NTCIP Generic Objects - OMG DDS RPC			
Field Support Equipment		Connected Vehicle Roadside Equipment		RSE status		US: NTCIP Generic Objects - OMG DDS RPC			
Field Support Equipment		ITS Roadway Equipment		field equipment commands		US: NTCIP Generic Objects - OMG DDS RPC			
Field Support Equipment		ITS Roadway Equipment		field equipment configuration settings		US: NTCIP Generic Objects - OMG DDS RPC			
ITS Roadway Equipment		Field Support Equipment		field equipment status		US: NTCIP Generic Objects - OMG DDS RPC			
ITS Roadway Equipment		Maint and Constr Management Center		field device status		US: NTCIP Generic Objects - OMG DDS RPC			
ITS Roadway Equipment		Maint and Constr Management Center		field equipment status		US: NTCIP Generic Objects - OMG DDS RPC			
Class	Timeframe	Proposed Resolution		Description				Regional Applicability	
Security	Near-term	Core authorization - coordination among centres		Develop an internationally acceptable standard for the user permission request coordination information triples contained within the Core Authorization Service Package.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.							Severity	Ultra
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Authorizing Center		Other Authorizing Centers		permission request coordination	(None-Data) - DATEX Messaging TCP		Work on the upper layer standards related to this solution have not been started.		
Other Authorizing Centers		Authorizing Center		permission request coordination	(None-Data) - DATEX Messaging TCP		Work on the upper layer standards related to this solution have not been started.		
Authorizing Center		Other Authorizing Centers		permission request coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Other Authorizing Centers		Authorizing Center		permission request coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Authorizing Center		Other Authorizing Centers		permission request coordination	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Other Authorizing Centers		Authorizing Center		permission request coordination	(None-Data) - Guaranteed Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Authorizing Center		Other Authorizing Centers		permission request coordination	(None-Data) - NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.		
Other Authorizing Centers		Authorizing Center		permission request coordination	(None-Data) - NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.		

Class	Security	Timeframe	Near-term	Proposed Resolution	Security and credentials management - coordination among CCMS		Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description				Regional Applicability	
Security	Near-term	Security and credentials management - coordination among CCMS		Develop internationally acceptable standardised solutions that facilitate Credential Management Systems coordination of enrolment credentialing, authorization credentialing, misbehavior analysis and certificate revocation processes, so that actions undertaken by one CCMS may be properly referenced and/or utilized by other CCMS, and so that relevant information for these activities may be appropriately shared between CCMS.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.							Severity	Ultra
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Cooperative ITS Credentials Management System		Other CCMS		authorization coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Other CCMS		Cooperative ITS Credentials Management System		authorization coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Other CCMS		Cooperative ITS Credentials Management System		enrollment coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Other CCMS		Cooperative ITS Credentials Management System		misbehavior analysis coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Other CCMS		Cooperative ITS Credentials Management System		revocation coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Other CCMS		enrollment coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Other CCMS		misbehavior analysis coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Cooperative ITS Credentials Management System		Other CCMS		revocation coordination	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Class	Timeframe	Proposed Resolution		Description				Regional Applicability	
Security	Near-term	V-L: Develop security requirements for DSRC communication (AIRB-T75)		Current security requirements for DSRC are only a general guideline. Detailed security requirements need to be developed.				Japan	
Issue Description:	The solution does not provide adequate communications security for the information triple, which potentially jeopardizes C-ITS operations.							Severity	Medium
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		vehicle signage data	JP: F-V Short Range Wireless Data(JP) - F-V Short Range Wireless Downlink Comm (JP)		Only general guideline given		
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	JP: F-V Short Range Wireless Data(JP) - F-V Short Range Wireless Downlink Comm (JP)		Only general guideline given		
Connected Vehicle Roadside Equipment		Vehicle OBE		reduced speed notification	JP: F-V Short Range Wireless Data(JP) - F-V Short Range Wireless Downlink Comm (JP)		Only general guideline given		
Connected Vehicle Roadside Equipment		Vehicle OBE		road weather advisories	JP: F-V Short Range Wireless Data(JP) - F-V Short Range Wireless Downlink Comm (JP)		Only general guideline given		
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	JP: F-V Short Range Wireless Data(JP) - F-V Short Range Wireless Downlink Comm (JP)		Only general guideline given		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle ID	JP: V-F Short Range Wireless Data (JP) - V-F Short Range Wireless Uplink Comm (JP)		Only general guideline given		
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle situation data	JP: V-F Short Range Wireless Data (JP) - V-F Short Range Wireless Uplink Comm (JP)		Only general guideline given		

Class	Centre	Timeframe	Near-term	Proposed Resolution	C-C: AU emergency traffic control	Regional Applicability	Australia	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Near-term	C-C: AU emergency traffic control	Update DATEX to support the provision of emergency traffic control information with a complete application specification.				Australia	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Emergency Management Center	Traffic Management Center	emergency traffic control request	(None-Data) - DATEX Messaging TCP		Work on the upper layer standards related to this solution have not been started.			
Traffic Management Center	Emergency Management Center	emergency traffic control information	(None-Data) - DATEX Messaging TCP		Work on the upper layer standards related to this solution have not been started.			
Emergency Management Center	Traffic Management Center	emergency traffic control request	(None-Data) - NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.			
Traffic Management Center	Emergency Management Center	emergency traffic control information	(None-Data) - NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.			
Emergency Management Center	Traffic Management Center	emergency traffic control request	(None-Data) - ODG-OCIT-C		Work on the upper layer standards related to this solution have not been started.			
Traffic Management Center	Emergency Management Center	emergency traffic control information	(None-Data) - ODG-OCIT-C		Work on the upper layer standards related to this solution have not been started.			
Emergency Management Center	Traffic Management Center	emergency traffic control request	DDS: TMDD - OMG DDS		Work on the upper layer standards related to this solution have not been started.			
Traffic Management Center	Emergency Management Center	emergency traffic control information	DDS: TMDD - OMG DDS		Work on the upper layer standards related to this solution have not been started.			
Emergency Management Center	Traffic Management Center	emergency traffic control request	US: TMDD - NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.			
Traffic Management Center	Emergency Management Center	emergency traffic control information	US: TMDD - NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.			
Emergency Management Center	Traffic Management Center	emergency traffic control request	US: TMDD - OMG DDS		Work on the upper layer standards related to this solution have not been started.			
Traffic Management Center	Emergency Management Center	emergency traffic control information	US: TMDD - OMG DDS		Work on the upper layer standards related to this solution have not been started.			
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Near-term	C-C: AU weather information	Adopt an existing weather information centre-to-centre data profile for use within the region.				Australia	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Surface Transportation Weather Service	Traffic Management Center	transportation weather information	(None-Data) - NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.			
Surface Transportation Weather Service	Traffic Management Center	transportation weather information	DDS: TMDD - OMG DDS		Work on the upper layer standards related to this solution have not been started.			
Surface Transportation Weather Service	Traffic Management Center	transportation weather information	EU: DATEX - DATEX Messaging TCP		Work on the upper layer standards related to this solution have not been started.			
Surface Transportation Weather Service	Traffic Management Center	transportation weather information	US: TMDD - NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.			
Surface Transportation Weather Service	Traffic Management Center	transportation weather information	US: TMDD - OMG DDS		Work on the upper layer standards related to this solution have not been started.			

Class	Centre	Timeframe	Near-term	Proposed Resolution	C-C: Equipment maintenance coordination	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Near-term	C-C: Equipment maintenance coordination	Develop an internationally acceptable ITS application specification for C-C exchange of equipment maintenance and status information				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Center	Maint and Constr Management Center	equipment maintenance request	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Center	Service Monitor System	service maintenance request	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Data Distribution System	Service Monitor System	service maintenance request	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Center	RSE fault data	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Center	service maintenance status	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Data Distribution System	service maintenance status	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Maint and Constr Management Center	RSE fault data	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Wide Area Information Disseminator	service maintenance status	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Wide Area Information Disseminator	Service Monitor System	service maintenance request	(None-Data) - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Center	RSE fault data	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Maint and Constr Management Center	RSE fault data	(None-Data) - Guaranteed Internet (X.509)	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Wide Area Information Disseminator	service maintenance status	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Wide Area Information Disseminator	Service Monitor System	service maintenance request	(None-Data) - Internet (US)	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Center	service maintenance status	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Data Distribution System	service maintenance status	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Data Distribution System	Service Monitor System	service maintenance request	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Center	Maint and Constr Management Center	equipment maintenance request	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Center	Service Monitor System	service maintenance request	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Data Distribution System	Service Monitor System	service maintenance request	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Center	equipment maintenance status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Center	RSE fault data	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Center	service maintenance status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Data Distribution System	service maintenance status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Maint and Constr Management Center	RSE fault data	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Service Monitor System	Wide Area Information Disseminator	service maintenance status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Wide Area Information Disseminator	Service Monitor System	service maintenance request	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Center	Service Monitor System	service maintenance request	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Center	equipment maintenance status	DDS: TMDD - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Center	Maint and Constr Management Center	equipment maintenance request	DDS: TMDD - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Center	equipment maintenance status	EU: DATEX - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Center	Maint and Constr Management Center	equipment maintenance request	US: TMDD - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	Center	equipment maintenance status	US: TMDD - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				



Class	Centre	Timeframe	Near-term	Proposed Resolution	C-C: Equipment maintenance coordination	Regional Applicability	Australia, European Union, United States		
Center		Maint and Constr Management Center		equipment maintenance request		US: TMDD -  OMG DDS		Work on the upper layer standards related to this solution have not been started.	
Maint and Constr Management Center		Center		equipment maintenance status		US: TMDD -  OMG DDS		Work on the upper layer standards related to this solution have not been started.	
Class	Timeframe	Proposed Resolution	Description					Regional Applicability	
Centre	Near-term	C-C: EU emergency traffic control	Update DATEX to support the provision of emergency traffic control information with a complete application specification.					European Union	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.							Severity	Ultra
Relevant Flow Solution Combinations									
Source		Destination		Flow	SolutionName		Notes		
Emergency Management Center		Traffic Management Center		emergency traffic control request	(None-Data) -  DATEX Messaging TCP		Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		Emergency Management Center		emergency traffic control information	(None-Data) -  DATEX Messaging TCP		Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		Emergency Management Center		emergency traffic control information	(None-Data) -  NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.		
Emergency Management Center		Traffic Management Center		emergency traffic control request	(None-Data) -  NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.		
Emergency Management Center		Traffic Management Center		emergency traffic control request	(None-Data) -  ODG-OCIT-C		Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		Emergency Management Center		emergency traffic control information	(None-Data) -  ODG-OCIT-C		Work on the upper layer standards related to this solution have not been started.		
Emergency Management Center		Traffic Management Center		emergency traffic control request	DDS: TMDD -  OMG DDS		Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		Emergency Management Center		emergency traffic control information	DDS: TMDD -  OMG DDS		Work on the upper layer standards related to this solution have not been started.		
Emergency Management Center		Traffic Management Center		emergency traffic control request	US: TMDD -  NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		Emergency Management Center		emergency traffic control information	US: TMDD -  NTCIP Messaging		Work on the upper layer standards related to this solution have not been started.		
Emergency Management Center		Traffic Management Center		emergency traffic control request	US: TMDD -  OMG DDS		Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		Emergency Management Center		emergency traffic control information	US: TMDD -  OMG DDS		Work on the upper layer standards related to this solution have not been started.		

Class	Centre	Timeframe	Near-term	Proposed Resolution	C-C: TMDD	Regional Applicability	United States
Class	Timeframe	Proposed Resolution	Description				Regional Applicability
Centre	Near-term	C-C: TMDD	Updates or additions to the TMDD need to occur to support several use cases including the addition of: sensor data accuracy; air quality information; roadway maintenance status; maintenance and construction work plans.				United States
Issue Description:	Some of the data elements for this information flow are not fully defined.						SeverityMedium
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Emissions Management Center	Transportation Information Center	air quality information	US: TMDD - NTCIP Messaging	The TMDD provides for exchanging sensor readings and for air quality incident information, but does not define aggregated region-wide air quality data.			
Emissions Management Center	Transportation Information Center	air quality information	US: TMDD - OMG DDS	The TMDD provides for exchanging sensor readings and for air quality incident information, but does not define aggregated region-wide air quality data.			
Issue Description:	The standard provides a robust design, but there may be more than one way to convey the information contained in this information flow and the standard provides little or no guidance on how to use the defined structures.						SeverityLow
Relevant Flow Solution Combinations							
Source	Destination	Flow	SolutionName	Notes			
Maint and Constr Management Center	Transportation Information Center	maint and constr work plans	US: TMDD - NTCIP Messaging				
Maint and Constr Management Center	Transportation Information Center	maint and constr work plans	US: TMDD - OMG DDS				

Class	Centre	Timeframe	Near-term	Proposed Resolution	C-C: TMDD	Regional Applicability	United States	
Issue Description:	The standard is missing accuracy requirements for some of its data, which may result in anomalous behaviour.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Transportation Information Center	Other Transportation Information Centers	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Transportation Information Center	Emergency Management Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Transportation Information Center	Fleet and Freight Management Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Emergency Management Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Emissions Management Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Fleet and Freight Management Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Other Traffic Management Centers	Traffic Management Center	device data	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Other Traffic Management Centers	Traffic Management Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Other Transportation Information Centers	Transportation Information Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Maint and Constr Management Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Other Traffic Management Centers	device data	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Other Traffic Management Centers	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Transit Management Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Transportation Information Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Transportation Information Center	Emergency Management Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Transportation Information Center	Fleet and Freight Management Center	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Transportation Information Center	Other Transportation Information Centers	road network conditions	US: TMDD - NTCIP Messaging	The accuracy of the sensors is not currently defined in the TMDD				
Other Traffic Management Centers	Traffic Management Center	device data	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Other Traffic Management Centers	Traffic Management Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Other Transportation Information Centers	Transportation Information Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Emergency Management Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Emissions Management Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Fleet and Freight Management Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Maint and Constr Management Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Other Traffic Management Centers	device data	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Other Traffic Management Centers	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Transit Management Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				
Traffic Management Center	Transportation Information Center	road network conditions	US: TMDD - OMG DDS	The accuracy of the sensors is not currently defined in the TMDD				

Class	Centre	Timeframe	Near-term	Proposed Resolution	C-C: Update SIRI for other transport modes	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Near-term	C-C: Update SIRI for other transport modes	Revise the SIRI application specification to support the exchange of ferry, airline, and inter-city rail information between centres.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Alternate Mode Transportation Center	Transportation Information Center	alternate mode incident information	(None-Data) - Guaranteed Internet (US)		Work on the upper layer standards related to this solution have not been started.			
Issue Description:	Required data elements are not defined.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Alternate Mode Transportation Center	Traffic Management Center	alternate mode service demand info	EU: SIRI - DATEX Messaging TCP		SIRI is designed for transit systems and does not specifically handle ferry or rail informaiton			
Alternate Mode Transportation Center	Traffic Management Center	alternate mode service demand info	EU: SIRI - Guaranteed Internet (X.509)		SIRI is designed for transit systems and does not specifically handle ferry or rail informaiton			
Alternate Mode Transportation Center	Traffic Management Center	alternate mode service demand info	EU: SIRI - ODG-OCIT-C		SIRI is designed for transit systems and does not specifically handle ferry or rail informaiton			
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Near-term	I-F: Environmental sensor stations	Develop an internationally acceptable ITS application specification for managing environmental sensor stations for secure communications with proper access control.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Traffic Management Center	ITS Roadway Equipment	environmental sensors control	(None-Data) - EU-ICIP-C2F		Work on the upper layer standards related to this solution have not been started.			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	environmental sensor data	(None-Data) - AU IFCP		Work on the upper layer standards related to this solution have not been started.			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	environmental sensor data	(None-Data) - EU-ICIP-C2F		Work on the upper layer standards related to this solution have not been started.			
ITS Roadway Equipment	Traffic Management Center	environmental sensor data	(None-Data) - EU-ICIP-C2F		Work on the upper layer standards related to this solution have not been started.			
Issue Description:	Data has been defined for SNMPv1, but needs to be updated to SNMPv3 format.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName		Notes			
Connected Vehicle Roadside Equipment	Emissions Management Center	emissions situation data	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			
Emissions Management Center	ITS Roadway Equipment	air quality sensor control	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	ITS roadway equipment information	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			
ITS Roadway Equipment	Emissions Management Center	air quality sensor data	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			
ITS Roadway Equipment	Maint and Constr Management Center	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			
ITS Roadway Equipment	Traffic Management Center	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			
Maint and Constr Management Center	ITS Roadway Equipment	environmental sensors control	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			
Traffic Management Center	ITS Roadway Equipment	environmental sensors control	US: NTCIP Environmental Sensors - SNMPv3		NTCIP 1204 data needs to be upgraded to SNMPv3.			



Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: Develop data accuracy requirements for probe data (DSRC-A11400)	Regional Applicability	Japan	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Near-term	V-L: Develop data accuracy requirements for probe data (DSRC-A11400)	Define accuracy requirements for probe data for various uses.				Japan	
Issue Description:	The standard is missing accuracy requirements for some of its data, which may result in anomalous behaviour.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle ID	JP: V-F Short Range Wireless Data (JP) - V-F Short Range Wireless Uplink Comm (JP)	Accuracy of data is not define				
Vehicle OBE	Connected Vehicle Roadside Equipment	vehicle situation data	JP: V-F Short Range Wireless Data (JP) - V-F Short Range Wireless Uplink Comm (JP)	Accuracy of data is not define				
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Near-term	V-L: Driver display conflicts	Develop an ITS application specification for identifying that a vehicle is displaying the incorrect information to a driver and alerting appropriate entities.				Australia, European Union	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Vehicle OBE	driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Connected Vehicle Roadside Equipment	driver display conflict warning	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
Vehicle OBE	Connected Vehicle Roadside Equipment	driver display snapshots	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				

Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: TPEG2	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description			Regional Applicability	
Vehicle-Local	Near-term	V-L: TPEG2		Develop an ITS application specification for transmission of TPEG2 to a vehicle from a local broadcast source.			Australia, European Union, United States	
Issue Description:	The standards development organization has established a work item for the subject standard but a draft is not available for this critical feature to enable the interface. The draft may be missing due to the work item being new or simply a lack of activity on the work item.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Transit Vehicle OBE		vehicle signage data	US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2945/4 is still under development.		
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2945/4 is still under development.		
Emergency Vehicle OBE		Vehicle OBE		vehicle signage data	US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2945/4 is still under development.		
Maint and Constr Vehicle OBE		Vehicle OBE		vehicle signage data	US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2945/4 is still under development.		
Traffic Management Center		Vehicle OBE		vehicle signage data	US: SAE Traveler Info - Mobile Internet (US)	SAE J2945/4 is still under development.		
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Vehicle OBE		work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.		
Connected Vehicle Roadside Equipment		Vehicle OBE		lane closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.		
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.		
Connected Vehicle Roadside Equipment		Vehicle OBE		road weather advisories	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.		
Connected Vehicle Roadside Equipment		Vehicle OBE		vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.		
Emergency Vehicle OBE		Vehicle OBE		vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.		
Maint and Constr Vehicle OBE		Vehicle OBE		vehicle signage data	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.		
Maint and Constr Vehicle OBE		Vehicle OBE		work zone information	TPEG2 - Local Broadcast Wireless (AU/EU)	While TPEG2 and local broadcast wireless are well defined, there is not an interoperability profile that defines how to pair the two.		
Traffic Management Center		Vehicle OBE		vehicle signage data	US: SAE Traveler Info - Mobile Internet (US)			
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	Road closure information can be transmitted with ISO 19321, TPEG2, or DEN Services		
Connected Vehicle Roadside Equipment		Vehicle OBE		road closure information	TPEG2 - Local Broadcast Wireless (AU/EU)	The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini		

Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: Update SAE J2735 to conform to ISO 14817	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Near-term	V-L: Update SAE J2735 to conform to ISO 14817	Update the format of the standard to conform to the rules of ISO 14817-1 so that data can easily be placed in the CIDCR and understood by all ITS experts				Australia, European Union, United States	
Issue Description:	The definition of data concepts should conform to ISO 14817-1 to promote reuse among ITS.						Severity	Low
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName	Notes			
Map Update System		Connected Vehicle Roadside Equipment	intersection geometry	DDS: SAE Other J2735 - OMG DDS	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Emergency Vehicle OBE		Connected Vehicle Roadside Equipment	local signal preemption request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Traffic Management Center		Commercial Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Traffic Management Center		Emergency Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Traffic Management Center		Transit Vehicle OBE	intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE	intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE	intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		ITS Roadway Equipment	intersection status monitoring	EU: Signal Control Messages - BTP/GeoNetworking/G5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Transit Vehicle OBE	intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Vehicle OBE	intersection status	EU: Signal Control Messages - BTP/GeoNetworking/G5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - CEN 5.8Ghz DSRC	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE	intersection status	EU: Signal Control Messages - CEN 5.8Ghz DSRC	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE	signal priority status	EU: Signal Control Messages - CEN 5.8Ghz DSRC	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Map Update System		Center	intersection geometry	EU: Signal Control Messages - DATEX Messaging TCP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Map Update System		Connected Vehicle Roadside Equipment	intersection geometry	EU: Signal Control Messages - EU-ICIP-C2F	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE	intersection status	EU: Signal Control Messages - FNTTP/M5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE	intersection status	EU: Signal Control Messages - FNTTP/M5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		ITS Roadway Equipment	intersection status monitoring	EU: Signal Control Messages - FNTTP/M5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Transit Vehicle OBE	intersection status	EU: Signal Control Messages - FNTTP/M5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Vehicle OBE	intersection status	EU: Signal Control Messages - FNTTP/M5	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Commercial Vehicle OBE		Connected Vehicle Roadside Equipment	local signal priority request	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Commercial Vehicle OBE	signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Emergency Vehicle OBE	signal priority status	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			
Connected Vehicle Roadside Equipment		Personal Information Device	intersection geometry	EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.			

Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: Update SAE J2735 to conform to ISO 14817	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		signal priority status		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection geometry		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment		local signal priority request		EU: Signal Control Messages - Local Broadcast Wireless (AU/EU)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Personal Information Device		intersection geometry		EU: Signal Control Messages - Mobile Internet (X.509)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Vehicle OBE		intersection geometry		EU: Signal Control Messages - Mobile Internet (X.509)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Vehicle OBE		intersection status		EU: Signal Control Messages - Mobile Internet (X.509)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		intersection status monitoring		EU: Signal Control Messages - Internet (X.509)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Transportation Information Center		vehicle environmental data		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Connected Vehicle Roadside Equipment		roadway geometry		US: SAE Signal Control Messages - SNMPv3	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		intersection status monitoring		US: SAE Signal Control Messages - WAVE UDP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE		intersection status		US: SAE Signal Control Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle path prediction		US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Personal Information Device		vehicle path prediction		US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Vehicle OBE		vehicle path prediction		US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance		US: SAE Basic Safety Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Vehicle OBEs	Connected Vehicle Roadside Equipment		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Vehicle OBEs	Transit Vehicle OBE		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Vehicle OBEs	Vehicle OBE		vehicle control event		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Vehicle OBEs	Vehicle OBE		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Other Vehicle OBEs		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Personal Information Device		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Vehicle OBE		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle control event		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Connected Vehicle Roadside Equipment		vehicle location and motion for surveillance		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Emergency Vehicle OBE		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Maint and Constr Vehicle OBE		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Other Vehicle OBEs		vehicle control event		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Other Vehicle OBEs		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	



Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: Update SAE J2735 to conform to ISO 14817	Regional Applicability	Australia, European Union, United States
Vehicle OBE	Personal Information Device		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Transit Vehicle OBE		vehicle location and motion		US: SAE Basic Safety Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Center		intersection geometry		US: SAE Other J2735 - Guaranteed Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Fleet and Freight Management Center	Commercial Vehicle OBE		road weather advisories		US: SAE Other J2735 - Guaranteed Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Maint and Constr Management Center	Personal Information Device		road weather advisories		US: SAE Other J2735 - Guaranteed Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Maint and Constr Management Center	Vehicle OBE		road weather advisories		US: SAE Other J2735 - Guaranteed Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Other EV OBEs		work zone warning notification		US: SAE Other J2735 - Guaranteed Mobile Internet (US), with WAVE alternative	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other EV OBEs	Emergency Vehicle OBE		work zone warning notification		US: SAE Other J2735 - Guaranteed Mobile Internet (US), with WAVE alternative	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transportation Information Center	Wide Area Information Disseminator		broadcast traveler information		US: SAE Other J2735 - Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Commercial Vehicle OBE	Emergency Vehicle OBE		vehicle collision information		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Maint and Constr Vehicle OBE		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Personal Information Device		location correction		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Personal Information Device		personal safety warning		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Personal Information Device		signal service status		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		restricted lanes application info		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		arriving train information		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		lane closure information		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		location correction		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		rail crossing warning		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		restricted lanes application info		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		road closure information		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		vehicle situation data parameters		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Personal Information Device		personal safety warning		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	

Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: Update SAE J2735 to conform to ISO 14817	Regional Applicability	Australia, European Union, United States
Maint and Constr Vehicle OBE	Connected Vehicle Roadside Equipment		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Maint and Constr Vehicle OBE	Other MCV OBEs		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other MCV OBEs		Maint and Constr Vehicle OBE		work zone warning notification		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Other Vehicle OBEs	Vehicle OBE		vehicle environmental data		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle environmental data		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Vehicle OBE	Emergency Vehicle OBE		vehicle collision information		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE		Other Vehicle OBEs		vehicle environmental data		US: SAE Other J2735 - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Personal Information Device	Connected Vehicle Roadside Equipment		personal signal service request		US: SAE Other J2735 - Local Unicast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE		Connected Vehicle Roadside Equipment		vehicle situation data		US: SAE Other J2735 - Local Unicast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Commercial Vehicle OBE	Fleet and Freight Management Center		vehicle environmental data		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Data Distribution System		Vehicle OBE		vehicle situation data parameters		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Emergency Vehicle OBE	Emergency Management Center		emergency vehicle tracking data		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Surface Transportation Weather Service		Vehicle OBE		transportation weather information		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Traffic Management Center	Vehicle OBE		intersection status		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center		Vehicle OBE		lane closure information		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Transportation Information Center	Vehicle OBE		vehicle situation data parameters		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE		Data Distribution System		vehicle situation data		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Vehicle OBE	Map Update System		vehicle location and motion for mapping		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE		Transportation Information Center		vehicle situation data		US: SAE Other J2735 - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
ITS Roadway Equipment	Connected Vehicle Roadside Equipment		arriving train information		US: SAE Other J2735 - OMG DDS RPC	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information		US: SAE Other J2735 - OMG DDS RPC	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Wayside Equipment	ITS Roadway Equipment		arriving train information		US: SAE Other J2735 - OMG DDS RPC	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		arriving train information		US: SAE Other J2735 - SNMPv3	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Map Update System	Connected Vehicle Roadside Equipment		intersection geometry		US: SAE Other J2735 - SNMPv3	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Wayside Equipment		Connected Vehicle Roadside Equipment		arriving train information		US: SAE Other J2735 - SNMPv3	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Wayside Equipment	ITS Roadway Equipment		arriving train information		US: SAE Other J2735 - SNMPv3	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment		Personal Information Device		intersection safety warning		US: SAE Other J2735 - WAVE UDP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Commercial Vehicle OBE	Vehicle OBE		special vehicle type alert		US: SAE Other J2735 - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment		Vehicle OBE		intersection safety warning		US: SAE Other J2735 - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Maint and Constr Vehicle OBE	Personal Information Device		personal safety warning		US: SAE Other J2735 - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Maint and Constr Vehicle OBE		Vehicle OBE		special vehicle type alert		US: SAE Other J2735 - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Other Vehicle OBEs	Vehicle OBE		intersection infringement info		US: SAE Other J2735 - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE		Vehicle OBE		special vehicle type alert		US: SAE Other J2735 - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.
Vehicle OBE	Connected Vehicle Roadside Equipment		intersection infringement info		US: SAE Other J2735 - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	

Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: Update SAE J2735 to conform to ISO 14817	Regional Applicability	Australia, European Union, United States
Vehicle OBE	Other Vehicle OBEs		intersection infringement info		US: SAE Other J2735 - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transportation Information Center	Personal Information Device		broadcast traveler information		US: SAE Other J2735 - Wide Area Broadcast (Upper)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transportation Information Center	Vehicle OBE		broadcast traveler information		US: SAE Other J2735 - Wide Area Broadcast (Upper)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Wide Area Information Disseminator	Personal Information Device		wide area broadcast traveler information		US: SAE Other J2735 - Wide Area Broadcast (Upper)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Wide Area Information Disseminator	Vehicle OBE		broadcast traveler information		US: SAE Other J2735 - Wide Area Broadcast (Upper)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Wide Area Information Disseminator	Vehicle OBE		wide area broadcast traveler information		US: SAE Other J2735 - Wide Area Broadcast (Upper)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Personal Information Device		personal safety warning		US: SAE Safety Awareness Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Vehicle OBE		emergency vehicle alert		US: SAE Safety Awareness Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Vehicle OBE		special vehicle type alert		US: SAE Safety Awareness Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Vehicle OBEs	Vehicle OBE		vehicle hazard event		US: SAE Safety Awareness Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Vehicle OBE	Other Vehicle OBEs		vehicle hazard event		US: SAE Safety Awareness Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		intersection status monitoring		US: SAE Signal Control Messages - Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Personal Information Device		intersection geometry		US: SAE Signal Control Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection geometry		US: SAE Signal Control Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		roadway geometry		US: SAE Signal Control Messages - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Personal Information Device		intersection geometry		US: SAE Signal Control Messages - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Vehicle OBE		intersection geometry		US: SAE Signal Control Messages - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Vehicle OBE		roadway geometry		US: SAE Signal Control Messages - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Commercial Vehicle OBE		intersection status		US: SAE Signal Control Messages - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Emergency Vehicle OBE		intersection status		US: SAE Signal Control Messages - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Center		intersection geometry		US: SAE Signal Control Messages - NTCIP Messaging	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Center		intersection geometry		US: SAE Signal Control Messages - OMG DDS	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Connected Vehicle Roadside Equipment		intersection geometry		US: SAE Signal Control Messages - OMG DDS RPC	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Connected Vehicle Roadside Equipment		roadway geometry		US: SAE Signal Control Messages - OMG DDS RPC	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Map Update System	Connected Vehicle Roadside Equipment		intersection geometry		US: SAE Signal Control Messages - SNMPv3	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE		intersection status		US: SAE Signal Control Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	ITS Roadway Equipment		intersection status monitoring		US: SAE Signal Control Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	

Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: Update SAE J2735 to conform to ISO 14817	Regional Applicability	Australia, European Union, United States
Connected Vehicle Roadside Equipment	Personal Information Device		intersection status		US: SAE Signal Control Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Personal Information Device		pedestrian safety information		US: SAE Signal Control Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		intersection status		US: SAE Signal Control Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		intersection status		US: SAE Signal Control Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Commercial Vehicle OBE	Connected Vehicle Roadside Equipment		local signal priority request		US: SAE Signal Preemption - Local Unicast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Commercial Vehicle OBE		signal priority status		US: SAE Signal Preemption - Local Unicast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Emergency Vehicle OBE		signal priority status		US: SAE Signal Preemption - Local Unicast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		signal priority status		US: SAE Signal Preemption - Local Unicast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Connected Vehicle Roadside Equipment		local signal preemption request		US: SAE Signal Preemption - Local Unicast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment		local signal priority request		US: SAE Signal Preemption - Local Unicast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Personal Information Device		local traveler information		US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Transit Vehicle OBE		vehicle signage data		US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		local traveler information		US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		reduced speed notification		US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		speed management information		US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		vehicle signage data		US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Vehicle OBE	Vehicle OBE		vehicle signage data		US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Maint and Constr Vehicle OBE	Vehicle OBE		vehicle signage data		US: SAE Traveler Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Vehicle OBE		speed management information		US: SAE Traveler Info - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Vehicle OBE		vehicle signage data		US: SAE Traveler Info - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Personal Information Device	Connected Vehicle Roadside Equipment		personal location		US: SAE VRU Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Personal Information Device	Emergency Vehicle OBE		personal location		US: SAE VRU Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Personal Information Device	Maint and Constr Vehicle OBE		personal location		US: SAE VRU Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Personal Information Device	Transit Vehicle OBE		personal location		US: SAE VRU Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Personal Information Device	Vehicle OBE		personal location		US: SAE VRU Messages - WAVE WSMP	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Vehicle OBE		road weather advisories		US: SAE Weather Info - Local Broadcast Wireless (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Management Center	Emergency Vehicle OBE		road weather advisories for emergency response		US: SAE Weather Info - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Fleet and Freight Management Center	Commercial Vehicle OBE		road weather advisories		US: SAE Weather Info - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	



Class	Vehicle-Local	Timeframe	Near-term	Proposed Resolution	V-L: Update SAE J2735 to conform to ISO 14817	Regional Applicability	Australia, European Union, United States	
Maint and Constr Management Center		Personal Information Device		road weather advisories		US: SAE Weather Info - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Maint and Constr Management Center	Vehicle OBE		road weather advisories		US: SAE Weather Info - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.		
Transportation Information Center		Vehicle OBE		road weather advisories		US: SAE Weather Info - Mobile Internet (US)	SAE J2735 does not explicitly define the meta-attributes as required by ISO 14817-1.	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Near-term	C-V: Transit vehicle schedule management	Develop an ITS application specification for managing transit vehicle schedule performance data from transit vehicles to a centre.				Australia, European Union	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName		Notes	
Transit Management Center		Transit Vehicle OBE		transit schedule information	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.	
Transit Vehicle OBE		Transit Management Center		transit vehicle schedule performance	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.	
Transit Management Center		Transit Vehicle OBE		transit schedule information	EU: Data Transmodel - Mobile XML		Work on the upper layer standards related to this solution have not been started.	
Transit Vehicle OBE		Transit Management Center		transit vehicle schedule performance	EU: Data Transmodel - Mobile XML		Work on the upper layer standards related to this solution have not been started.	
Transit Management Center		Transit Vehicle OBE		transit schedule information	US: TCIP - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.	
Transit Vehicle OBE		Transit Management Center		transit vehicle schedule performance	US: TCIP - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.	
Issue Description:	While the indicated standards nominally address the information flow, the design may not meet practical constraints because this particular use case was not the focus of the design effort.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName		Notes	
Transit Vehicle OBE		Transit Management Center		transit vehicle schedule performance	EU: Data Transmodel - Mobile XML		The conditions under which the message is sent; the rules indicating which data fields should be populated for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Notes: Application data, mini	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Near-term	C-V: Work zone status	Develop an ITS application specification for a maintenance and construction vehicle to report and update the status of a work zone to a centre.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName		Notes	
Maint and Constr Vehicle OBE		Maint and Constr Management Center		work zone status	(None-Data) - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.	
Maint and Constr Vehicle OBE		Maint and Constr Management Center		work zone status	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.	
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName		Notes	
Maint and Constr Management Center		Vehicle OBE		work zone information	EU: DEN Service - Mobile Internet (X.509)		While both DEN and mobile Internet are well defined, there is no an interoperability profile that defines how to pair the two together and address which port numbers to use and how to identify the center to which the information should be sent.	

Class	Foundational	Timeframe	Medium-term	Proposed Resolution	Updates for data distribution (non-critical flows)	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Foundational	Medium-term	Updates for data distribution (non-critical flows)	Update data dictionary standards to conform to the chosen Data Distribution Technology for those interfaces where this technology might be appropriate. This may include updates to standards such as: J3067; ATIS; Incident management; UBL; some J2735; some NTCIP. (i.e., this would potentially convert ASN.1 data into the format that is native to the chosen DDT.)				United States	
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	ITS Roadway Equipment	lighting system control data	DDS: NTCIP Lighting - OMG DDS RPC					
Fleet and Freight Management Center	Transportation Information Center	route request	DDS: ATIS - OMG DDS					
Other Transportation Information Centers	Transportation Information Center	multimodal information	DDS: ATIS - OMG DDS					
Other Transportation Information Centers	Transportation Information Center	parking information	DDS: ATIS - OMG DDS					
Parking Management System	Traffic Management Center	parking information	DDS: ATIS - OMG DDS					
Parking Management System	Transit Management Center	parking information	DDS: ATIS - OMG DDS					
Parking Management System	Transportation Information Center	parking information	DDS: ATIS - OMG DDS					
Traffic Management Center	Media	traffic information for media	DDS: ATIS - OMG DDS					
Transportation Information Center	Fleet and Freight Management Center	route plan	DDS: ATIS - OMG DDS					
Transportation Information Center	Media	traffic information for media	DDS: ATIS - OMG DDS					
Transportation Information Center	Media	traveler information for media	DDS: ATIS - OMG DDS					
Transportation Information Center	Other Transportation Information Centers	multimodal information	DDS: ATIS - OMG DDS					
Transportation Information Center	Other Transportation Information Centers	parking information	DDS: ATIS - OMG DDS					
Travel Services Provider System	Transportation Information Center	travel service information	DDS: ATIS - OMG DDS					
Emergency Management Center	Emergency Telecommunications System	incident information for public	DDS: Incident Management - OMG DDS					
Emergency Management Center	Maint and Constr Management Center	emergency plan coordination	DDS: Incident Management - OMG DDS					
Emergency Management Center	Maint and Constr Management Center	evacuation information	DDS: Incident Management - OMG DDS					
Emergency Management Center	Other Emergency Management Centers	emergency plan coordination	DDS: Incident Management - OMG DDS					
Emergency Management Center	Other Emergency Management Centers	incident report	DDS: Incident Management - OMG DDS					
Emergency Management Center	Rail Operations Center	emergency plan coordination	DDS: Incident Management - OMG DDS					
Emergency Management Center	Rail Operations Center	evacuation information	DDS: Incident Management - OMG DDS					
Emergency Management Center	Traffic Management Center	emergency plan coordination	DDS: Incident Management - OMG DDS					
Emergency Management Center	Traffic Management Center	emergency route request	DDS: Incident Management - OMG DDS					
Emergency Management Center	Traffic Management Center	evacuation information	DDS: Incident Management - OMG DDS					
Emergency Management Center	Transit Management Center	emergency plan coordination	DDS: Incident Management - OMG DDS					
Emergency Management Center	Transit Management Center	evacuation information	DDS: Incident Management - OMG DDS					
Emergency Management Center	Transportation Information Center	evacuation information	DDS: Incident Management - OMG DDS					
Fleet and Freight Management Center	Emergency Management Center	hazmat information	DDS: Incident Management - OMG DDS					
Maint and Constr Management Center	Emergency Management Center	emergency plan coordination	DDS: Incident Management - OMG DDS					
Other Emergency Management Centers	Emergency Management Center	emergency plan coordination	DDS: Incident Management - OMG DDS					
Other Emergency Management Centers	Emergency Management Center	incident report	DDS: Incident Management - OMG DDS					

Class	Foundational	Timeframe	Medium-term	Proposed Resolution	Updates for data distribution (non-critical flows)		Regional Applicability	United States	
Rail Operations Center		Emergency Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS			
Shelter Provider Center		Emergency Management Center		shelter information		DDS: Incident Management - OMG DDS			
Shelter Provider Center		Transportation Information Center		shelter information		DDS: Incident Management - OMG DDS			
Traffic Management Center		Emergency Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS			
Traffic Management Center		Emergency Management Center		emergency routes		DDS: Incident Management - OMG DDS			
Transit Management Center		Emergency Management Center		emergency plan coordination		DDS: Incident Management - OMG DDS			
ITS Roadway Equipment		Traffic Management Center		lighting system status		DDS: NTCIP Lighting - OMG DDS RPC			
ITS Roadway Equipment		Traffic Management Center		traffic metering status		DDS: NTCIP Ramp Meters - OMG DDS RPC			
Traffic Management Center		ITS Roadway Equipment		traffic metering control		DDS: NTCIP Ramp Meters - OMG DDS RPC			
Traffic Management Center		Transit Management Center		traffic control priority status		DDS: NTCIP Signal Priority - OMG DDS		These standards are not intended to operate together, but they propvide most of the information necessary	
Emergency Management Center		ITS Roadway Equipment		work zone warning device control		DDS: NTCIP Warning Device - OMG DDS RPC			
ITS Roadway Equipment		Emergency Management Center		work zone warning status		DDS: NTCIP Warning Device - OMG DDS RPC			
ITS Roadway Equipment		Maint and Constr Management Center		work zone warning status		DDS: NTCIP Warning Device - OMG DDS RPC			
Maint and Constr Management Center		ITS Roadway Equipment		work zone warning device control		DDS: NTCIP Warning Device - OMG DDS RPC			
Commercial Vehicle Check Equipment		Commercial Vehicle Administration Center		driver log		DDS: SAE J3067 (J2735 SE) - OMG DDS			
Commercial Vehicle OBE Service Provider		Commercial Vehicle Check Equipment		driver log		DDS: SAE J3067 (J2735 SE) - OMG DDS			
Commercial Vehicle OBE Service Provider		Fleet and Freight Management Center		driver log		DDS: SAE J3067 (J2735 SE) - OMG DDS			
Commercial Vehicle OBE Service Provider		Other CVOBE Service Provider		driver log		DDS: SAE J3067 (J2735 SE) - OMG DDS			
Connected Vehicle Roadside Equipment		Commercial Vehicle Administration Center		driver log		DDS: SAE J3067 (J2735 SE) - OMG DDS			
Fleet and Freight Management Center		Commercial Vehicle Administration Center		driver log		DDS: SAE J3067 (J2735 SE) - OMG DDS			
Other CVOBE Service Provider		Commercial Vehicle OBE Service Provider		driver log		DDS: SAE J3067 (J2735 SE) - OMG DDS			
Connected Vehicle Roadside Equipment		Parking Management System		commercial vehicle identification		DDS: SAE J3067 (J2735 SE) - OMG DDS RPC			
Map Update System		Connected Vehicle Roadside Equipment		intersection geometry		DDS: SAE Other J2735 - OMG DDS		SAE J2735 was not designed to be implemented over DDS; interface details need to be defined.	
Fleet and Freight Management Center		Freight Distribution and Logistics Center		freight transportation status		DDS: UBL - OMG DDS			
Freight Distribution and Logistics Center		Intermodal Customer System		freight transportation status		DDS: UBL - OMG DDS			
Freight Distribution and Logistics Center		Intermodal Terminal		freight transportation status		DDS: UBL - OMG DDS			
Intermodal Customer System		Freight Distribution and Logistics Center		freight transport booking		DDS: UBL - OMG DDS			
Class	Timeframe	Proposed Resolution		Description				Regional Applicability	
Security	Medium-term	Core authorization - requests		Develop an internationally acceptable standard for the permission application and permission application receipt information triples contained within the Core Authorization Service Package.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.							Severity	Ultra
Relevant Flow Solution Combinations									
Source	Destination		Flow	SolutionName		Notes			
Center	Personal Information Device		permission application receipt	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.			
Center	Personal Information Device		permission application receipt	(None-Data) - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.			
Personal Information Device	Center		permission application	(None-Data) - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.			
Personal Information Device	Center		permission application	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.			

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Road maintenance status	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Medium-term	C-C: Road maintenance status	Develop an internationally acceptable ITS application specification for C-C exchange of seasonal maintenance data.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Maint and Constr Management Center		Vehicle OBE		roadway maintenance status	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Management Center		Emergency Management Center		roadway maintenance status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Management Center		Transportation Information Center		roadway maintenance status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Management Center		Emergency Management Center		roadway maintenance status	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Management Center		Transportation Information Center		roadway maintenance status	(None-Data) - OMG DDS	Work on the upper layer standards related to this solution have not been started.		



Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Medium-term	C-C: Update TCIP for encoding rules and details	Update the TCIP standard to conform to 14817-1 and provide encoding rules and examples. Also provide dialog and exchange rules for Transit Management Centre to Transit Vehicle flows such as downloading schedule information.				United States	
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Emergency Management Center	Transit Vehicle OBE	alarm acknowledge	US: TCIP - Mobile Internet (US)					
Personal Information Device	Transit Management Center	transit stop request	US: TCIP - Mobile Internet (US)					
Transit Management Center	Personal Information Device	personal transit information	US: TCIP - Mobile Internet (US)					
Transit Management Center	Transit Vehicle OBE	alarm acknowledge	US: TCIP - Mobile Internet (US)					
Transit Management Center	Transit Vehicle OBE	connection protection instructions	US: TCIP - Mobile Internet (US)					
Transit Management Center	Transit Vehicle OBE	fare management information	US: TCIP - Mobile Internet (US)					
Transit Management Center	Transit Vehicle OBE	transit schedule information	US: TCIP - Mobile Internet (US)					
Transit Management Center	Transit Vehicle OBE	transit stop request	US: TCIP - Mobile Internet (US)					
Transit Management Center	Transit Vehicle OBE	transit traveler information	US: TCIP - Mobile Internet (US)					
Transit Management Center	Transit Vehicle OBE	transit vehicle operator information	US: TCIP - Mobile Internet (US)					
Transit Vehicle OBE	Emergency Management Center	alarm notification	US: TCIP - Mobile Internet (US)					
Transit Vehicle OBE	Transit Management Center	alarm notification	US: TCIP - Mobile Internet (US)					
Transit Vehicle OBE	Transit Management Center	demand response passenger and use data	US: TCIP - Mobile Internet (US)					
Transit Vehicle OBE	Transit Management Center	fare collection data	US: TCIP - Mobile Internet (US)					
Transit Vehicle OBE	Transit Management Center	transit vehicle conditions	US: TCIP - Mobile Internet (US)					
Transit Vehicle OBE	Transit Management Center	transit vehicle loading data	US: TCIP - Mobile Internet (US)					
Transit Vehicle OBE	Transit Management Center	transit vehicle location data	US: TCIP - Mobile Internet (US)					
Transit Vehicle OBE	Transit Management Center	transit vehicle schedule performance	US: TCIP - Mobile Internet (US)					

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States	
Issue Description:	The standards do not unambiguously define which set of encoding rules to use.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Connected Vehicle Roadside Equipment	Transit Vehicle OBE	transit stop request	US: TCIP - Local Unicast Wireless (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Personal Information Device	Transit Vehicle OBE	transit stop request	US: TCIP - Local Unicast Wireless (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Emergency Management Center	Transit Vehicle OBE	alarm acknowledge	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Personal Information Device	Transit Management Center	transit stop request	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Transit Management Center	Personal Information Device	personal transit information	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Transit Management Center	Transit Vehicle OBE	alarm acknowledge	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Alternate Mode Transportation Center	Transit Management Center	multimodal service data	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Alternate Mode Transportation Center	Transit Management Center	service information response	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Alternate Mode Transportation Center	Transportation Information Center	multimodal service data	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Connected Vehicle Roadside Equipment	Public Information Device	transit vehicle information	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Emergency Management Center	Public Information Device	alarm acknowledge	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Public Information Device	Connected Vehicle Roadside Equipment	transit stop request	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Public Information Device	Connected Vehicle Roadside Equipment	transit traveler information	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Public Information Device	Emergency Management Center	alarm notification	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Public Information Device	Transit Management Center	alarm notification	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				
Public Information Device	Transit Management Center	transit fare and passenger status	US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.				

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States
Public Information Device	Transit Management Center		transit stop request		US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Alternate Mode Transportation Center	service information request		US: TCIP - Guaranteed Internet (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Alternate Mode Transportation Center		transit multimodal information		US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Public Information Device	transit fare information		US: TCIP - Guaranteed Internet (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Public Information Device		transit traveler information		US: TCIP - Guaranteed Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transportation Information Center	Alternate Mode Transportation Center	service information request		US: TCIP - Guaranteed Internet (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Connected Vehicle Roadside Equipment	Personal Information Device		transit stop guidance		US: TCIP - Local Broadcast Wireless (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment	transit vehicle information		US: TCIP - Local Broadcast Wireless (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Vehicle OBE	Personal Information Device		transit vehicle information		US: TCIP - Local Broadcast Wireless (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Transit Vehicle OBE	connection protection instructions		US: TCIP - Mobile Internet (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Transit Vehicle OBE		fare management information		US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Transit Vehicle OBE	transit schedule information		US: TCIP - Mobile Internet (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Transit Vehicle OBE		transit stop request		US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Transit Vehicle OBE	transit traveler information		US: TCIP - Mobile Internet (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center	Transit Vehicle OBE		transit vehicle operator information		US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Vehicle OBE	Emergency Management Center	alarm notification		US: TCIP - Mobile Internet (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Vehicle OBE	Transit Management Center		alarm notification		US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Vehicle OBE	Transit Management Center	demand response passenger and use data		US: TCIP - Mobile Internet (US)		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States
Transit Vehicle OBE		Transit Management Center		fare collection data	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Vehicle OBE		Transit Management Center		transit vehicle conditions	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Vehicle OBE		Transit Management Center		transit vehicle loading data	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Vehicle OBE		Transit Management Center		transit vehicle location data	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Vehicle OBE		Transit Management Center		transit vehicle schedule performance	US: TCIP - Mobile Internet (US)	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Alternate Mode Transportation Center		Transit Management Center		multimodal service data	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Alternate Mode Transportation Center		Transit Management Center		service information response	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Alternate Mode Transportation Center		Transportation Information Center		multimodal service data	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Connected Vehicle Roadside Equipment		Public Information Device		transit vehicle information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Emergency Management Center		Transit Management Center		emergency transit service request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Other Transit Management Centers		Transit Management Center		transit service coordination	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Other Transportation Information Centers		Transportation Information Center		transit service information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Personal Information Device		Transit Management Center		transit stop request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Public Information Device		Connected Vehicle Roadside Equipment		transit stop request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Public Information Device		Connected Vehicle Roadside Equipment		transit traveler information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Public Information Device		Transit Management Center		transit stop request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Traffic Management Center		Transit Management Center		transit service change request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Traffic Management Center		Transportation Information Center		transit service change request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	



Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States
Transit Management Center		Alternate Mode Transportation Center		service information request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Alternate Mode Transportation Center		transit multimodal information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Emergency Management Center		emergency transit service response	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Emissions Management Center		transit and fare schedules	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Other Transit Management Centers		transit service coordination	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Parking Management System		transit schedule adherence information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Parking Management System		transit schedule information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Public Information Device		transit traveler information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Traffic Management Center		traffic control priority request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Traffic Management Center		transit system data	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Transit Vehicle OBE		connection protection instructions	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Transit Vehicle OBE		transit stop request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Transportation Information Center		demand responsive transit plan	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Transportation Information Center		emergency transit schedule information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Transportation Information Center		transit and fare schedules	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Transportation Information Center		transit incident information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Transportation Information Center		transit schedule adherence information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	
Transit Management Center		Transportation Information Center		transit trip plan	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifiies the rules.	

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States
Transportation Information Center	Alternate Mode Transportation Center			service information request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transportation Information Center	Other Transportation Information Centers			transit service information	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transportation Information Center	Transit Management Center			demand responsive transit request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transportation Information Center	Transit Management Center			transit service change request	US: TCIP - NTCIP Messaging	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Emergency Management Center	Transit Management Center			emergency transit service request	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Other Transit Management Centers	Transit Management Center			transit service coordination	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Other Transportation Information Centers	Transportation Information Center			transit service information	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Traffic Management Center	Transit Management Center			transit service change request	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Traffic Management Center	Transportation Information Center			transit service change request	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Emergency Management Center			emergency transit service response	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Emissions Management Center			transit and fare schedules	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Other Transit Management Centers			transit service coordination	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Parking Management System			transit schedule adherence information	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Parking Management System			transit schedule information	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Traffic Management Center			traffic control priority request	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Traffic Management Center			transit system data	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Transportation Information Center			demand responsive transit plan	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	
Transit Management Center	Transportation Information Center			emergency transit schedule information	US: TCIP - OMG DDS	The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.	

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States
Transit Management Center		Transportation Information Center		transit and fare schedules	US: TCIP - OMG DDS		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.
Transit Management Center		Transportation Information Center		transit incident information	US: TCIP - OMG DDS		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.
Transit Management Center		Transportation Information Center		transit schedule adherence information	US: TCIP - OMG DDS		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.
Transit Management Center		Transportation Information Center		transit trip plan	US: TCIP - OMG DDS		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.
Transportation Information Center		Other Transportation Information Centers		transit service information	US: TCIP - OMG DDS		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.
Transportation Information Center		Transit Management Center		demand responsive transit request	US: TCIP - OMG DDS		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.
Transportation Information Center		Transit Management Center		transit service change request	US: TCIP - OMG DDS		The standard mentions encoding rule options such as XML and DER but allows each implementation to choose its own set of rules while failing to provide sample wording for specifications to ensure that an agency correctly specifies the rules.

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States	
Issue Description:	The definition of data concepts should conform to ISO 14817-1 to promote reuse among ITS.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Alternate Mode Transportation Center	Transit Management Center	multimodal service data	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Alternate Mode Transportation Center	Transit Management Center	service information response	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Alternate Mode Transportation Center	Transportation Information Center	multimodal service data	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Emergency Management Center	Transit Management Center	emergency transit service request	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Other Transit Management Centers	Transit Management Center	transit service coordination	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Other Transportation Information Centers	Transportation Information Center	transit service information	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Traffic Management Center	Transit Management Center	transit service change request	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Traffic Management Center	Transportation Information Center	transit service change request	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Alternate Mode Transportation Center	service information request	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Alternate Mode Transportation Center	transit multimodal information	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Emergency Management Center	emergency transit service response	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Emissions Management Center	transit and fare schedules	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Other Transit Management Centers	transit service coordination	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Parking Management System	transit schedule adherence information	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Parking Management System	transit schedule information	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Traffic Management Center	traffic control priority request	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Traffic Management Center	transit system data	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Transportation Information Center	demand responsive transit plan	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Transportation Information Center	emergency transit schedule information	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Transportation Information Center	transit and fare schedules	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Transportation Information Center	transit incident information	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Transportation Information Center	transit schedule adherence information	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Transportation Information Center	transit trip plan	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transportation Information Center	Alternate Mode Transportation Center	service information request	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transportation Information Center	Other Transportation Information Centers	transit service information	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transportation Information Center	Transit Management Center	demand responsive transit request	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transportation Information Center	Transit Management Center	transit service change request	DDS: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Connected Vehicle Roadside Equipment	Transit Vehicle OBE	transit stop request	US: TCIP - Local Unicast Wireless (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Personal Information Device	Transit Vehicle OBE	transit stop request	US: TCIP - Local Unicast Wireless (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Emergency Management Center	Transit Vehicle OBE	alarm acknowledge	US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Personal Information Device	Transit Management Center	transit stop request	US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Personal Information Device	personal transit information	US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Transit Vehicle OBE	alarm acknowledge	US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Transit Management Center	Transit Vehicle OBE	connection protection instructions	US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				
Alternate Mode Transportation Center	Transit Management Center	multimodal service data	US: TCIP - Guaranteed Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.				



Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States
Alternate Mode Transportation Center	Transit Management Center		service information response		US: TCIP - Guaranteed Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Alternate Mode Transportation Center	Transportation Information Center	multimodal service data		US: TCIP - Guaranteed Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Public Information Device		transit vehicle information		US: TCIP - Guaranteed Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Management Center	Public Information Device	alarm acknowledge		US: TCIP - Guaranteed Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Connected Vehicle Roadside Equipment	transit stop request		US: TCIP - Guaranteed Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Connected Vehicle Roadside Equipment	transit traveler information		US: TCIP - Guaranteed Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Emergency Management Center		alarm notification		US: TCIP - Guaranteed Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Transit Management Center	alarm notification		US: TCIP - Guaranteed Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Transit Management Center		transit fare and passenger status		US: TCIP - Guaranteed Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Transit Management Center	transit stop request		US: TCIP - Guaranteed Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Alternate Mode Transportation Center		service information request		US: TCIP - Guaranteed Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Alternate Mode Transportation Center	transit multimodal information		US: TCIP - Guaranteed Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Public Information Device		transit fare information		US: TCIP - Guaranteed Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Public Information Device	transit traveler information		US: TCIP - Guaranteed Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transportation Information Center	Alternate Mode Transportation Center		service information request		US: TCIP - Guaranteed Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Personal Information Device	transit stop guidance		US: TCIP - Local Broadcast Wireless (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Connected Vehicle Roadside Equipment	transit vehicle information		US: TCIP - Local Broadcast Wireless (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Personal Information Device	transit vehicle information		US: TCIP - Local Broadcast Wireless (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transit Vehicle OBE		fare management information		US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transit Vehicle OBE	transit schedule information		US: TCIP - Mobile Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transit Vehicle OBE		transit stop request		US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transit Vehicle OBE	transit traveler information		US: TCIP - Mobile Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transit Vehicle OBE		transit vehicle operator information		US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Emergency Management Center	alarm notification		US: TCIP - Mobile Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Transit Management Center		alarm notification		US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Transit Management Center	demand response passenger and use data		US: TCIP - Mobile Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Transit Management Center		fare collection data		US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Transit Management Center	transit vehicle conditions		US: TCIP - Mobile Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Transit Management Center		transit vehicle loading data		US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Transit Management Center	transit vehicle location data		US: TCIP - Mobile Internet (US)		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Vehicle OBE	Transit Management Center		transit vehicle schedule performance		US: TCIP - Mobile Internet (US)	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Alternate Mode Transportation Center	Transit Management Center	multimodal service data		US: TCIP - NTCIP Messaging		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Alternate Mode Transportation Center	Transit Management Center		service information response		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Alternate Mode Transportation Center	Transportation Information Center	multimodal service data		US: TCIP - NTCIP Messaging		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Connected Vehicle Roadside Equipment	Public Information Device		transit vehicle information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Management Center	Transit Management Center	emergency transit service request		US: TCIP - NTCIP Messaging		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Transit Management Centers	Transit Management Center		transit service coordination		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Transportation Information Centers	Transportation Information Center	transit service information		US: TCIP - NTCIP Messaging		TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States
Personal Information Device	Transit Management Center		transit stop request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Connected Vehicle Roadside Equipment		transit stop request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Connected Vehicle Roadside Equipment		transit traveler information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Public Information Device	Transit Management Center		transit stop request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Transit Management Center		transit service change request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Transportation Information Center		transit service change request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Alternate Mode Transportation Center		service information request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Alternate Mode Transportation Center		transit multimodal information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Emergency Management Center		emergency transit service response		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Emissions Management Center		transit and fare schedules		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Other Transit Management Centers		transit service coordination		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Parking Management System		transit schedule adherence information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Parking Management System		transit schedule information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Public Information Device		transit traveler information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Traffic Management Center		traffic control priority request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Traffic Management Center		transit system data		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transit Vehicle OBE		connection protection instructions		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transit Vehicle OBE		transit stop request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transportation Information Center		demand responsive transit plan		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transportation Information Center		emergency transit schedule information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transportation Information Center		transit and fare schedules		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transportation Information Center		transit incident information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transportation Information Center		transit schedule adherence information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Transportation Information Center		transit trip plan		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transportation Information Center	Alternate Mode Transportation Center		service information request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transportation Information Center	Other Transportation Information Centers		transit service information		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transportation Information Center	Transit Management Center		demand responsive transit request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transportation Information Center	Transit Management Center		transit service change request		US: TCIP - NTCIP Messaging	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Emergency Management Center	Transit Management Center		emergency transit service request		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Transit Management Centers	Transit Management Center		transit service coordination		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Other Transportation Information Centers	Transportation Information Center		transit service information		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Transit Management Center		transit service change request		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Traffic Management Center	Transportation Information Center		transit service change request		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Emergency Management Center		emergency transit service response		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Emissions Management Center		transit and fare schedules		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Other Transit Management Centers		transit service coordination		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Parking Management System		transit schedule adherence information		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	
Transit Management Center	Parking Management System		transit schedule information		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.	

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: Update TCIP for encoding rules and details	Regional Applicability	United States
Transit Management Center		Traffic Management Center		traffic control priority request		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transit Management Center		Traffic Management Center		transit system data		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transit Management Center		Transportation Information Center		demand responsive transit plan		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transit Management Center		Transportation Information Center		emergency transit schedule information		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transit Management Center		Transportation Information Center		transit and fare schedules		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transit Management Center		Transportation Information Center		transit incident information		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transit Management Center		Transportation Information Center		transit schedule adherence information		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transit Management Center		Transportation Information Center		transit trip plan		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transportation Information Center		Other Transportation Information Centers		transit service information		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transportation Information Center		Transit Management Center		demand responsive transit request		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.
Transportation Information Center		Transit Management Center		transit service change request		US: TCIP - OMG DDS	TCIP does not explicitly define the meta-attributes as required by ISO 14817-1.

Class	Timeframe	Proposed Resolution	Description	Regional Applicability
Centre	Medium-term	C-C: Update TMDD (Mid-term)	Updates or additions to the TMDD need to occur to support several use cases including the addition of: managing the exchange of equipment faults, equipment maintenance requests, and equipment maintenance status.	United States

Issue Description:	Some of the data elements for this information flow are not fully defined.				Severity	Medium
Relevant Flow Solution Combinations						
Source	Destination	Flow	SolutionName	Notes		
Center	Maint and Constr Management Center	equipment maintenance request	US: TMDD - NTCIP Messaging	The TMDD defines how to exchange information about the operational status of devices; however, it does not define a mechanism to explicitly ask for maintenance. The existing definition would allow for this operation only if the maintenance center knows th		
Maint and Constr Management Center	Center	equipment maintenance status	US: TMDD - NTCIP Messaging	The TMDD defines how to exchange information about the operational status of devices; however, it does not define a mechanism to explicitly ask for maintenance. The existing definition would allow for this operation only if the maintenance center knows th		
Service Monitor System	Center	RSE fault data	US: TMDD - NTCIP Messaging	The TMDD defines generic on/off/failed status, but not the level of detail required by this flow		
Service Monitor System	Maint and Constr Management Center	RSE fault data	US: TMDD - NTCIP Messaging	The TMDD defines generic on/off/failed status, but not the level of detail required by this flow		
Center	Maint and Constr Management Center	equipment maintenance request	US: TMDD - OMG DDS	The TMDD defines how to exchange information about the operational status of devices; however, it does not define a mechanism to explicitly ask for maintenance. The existing definition would allow for this operation only if the maintenance center knows th		
Maint and Constr Management Center	Center	equipment maintenance status	US: TMDD - OMG DDS	The TMDD defines how to exchange information about the operational status of devices; however, it does not define a mechanism to explicitly ask for maintenance. The existing definition would allow for this operation only if the maintenance center knows th		
Service Monitor System	Center	RSE fault data	US: TMDD - OMG DDS	The TMDD defines generic on/off/failed status, but not the level of detail required by this flow		
Service Monitor System	Maint and Constr Management Center	RSE fault data	US: TMDD - OMG DDS	The TMDD defines generic on/off/failed status, but not the level of detail required by this flow		

Class	Centre	Timeframe	Medium-term	Proposed Resolution	C-C: US signal priority/preemption	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Centre	Medium-term	C-C: US signal priority/preemption	Develop an ITS application specification for centres to exchange requests and status for signal priority/preemption along a route.				United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Transit Management Center	traffic control priority status	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Transit Management Center	Traffic Management Center	traffic control priority request	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Transit Management Center	traffic control priority status	DDS: NTCIP Signal Priority - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Transit Management Center	Traffic Management Center	traffic control priority request	DDS: TCIP - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Transit Management Center	traffic control priority status	EU: Data Transmodel - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Transit Management Center	Traffic Management Center	traffic control priority request	EU: Data Transmodel - DATEX Messaging TCP	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Transit Management Center	traffic control priority status	EU: Data Transmodel - ODG-OCIT-C	Work on the upper layer standards related to this solution have not been started.				
Transit Management Center	Traffic Management Center	traffic control priority request	EU: Data Transmodel - ODG-OCIT-C	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Transit Management Center	traffic control priority status	US: NTCIP Signal Priority - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	Transit Management Center	traffic control priority status	US: NTCIP Signal Priority - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Transit Management Center	Traffic Management Center	traffic control priority request	US: TCIP - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.				
Transit Management Center	Traffic Management Center	traffic control priority request	US: TCIP - OMG DDS	Work on the upper layer standards related to this solution have not been started.				
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Traffic Management Center	Transit Management Center	traffic control priority status	US: NTCIP Signal Priority - NTCIP Messaging	these standards are not designed to work together, but they provide much of the technical details from which a solution can be created.				
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Emergency Management Center	Traffic Management Center	emergency traffic control request	US: TMDD - NTCIP Messaging	Centre-to-centre requests for signal preemption and priority are not defined.				
Traffic Management Center	Emergency Management Center	emergency traffic control information	US: TMDD - NTCIP Messaging	Centre-to-centre information for signal preemption and priority are not defined.				
Emergency Management Center	Traffic Management Center	emergency traffic control request	US: TMDD - OMG DDS	Centre-to-centre requests for signal preemption and priority are not defined.				
Traffic Management Center	Emergency Management Center	emergency traffic control information	US: TMDD - OMG DDS	Centre-to-centre information for signal preemption and priority are not defined.				



Class	Field	Timeframe	Medium-term	Proposed Resolution	I-F: CCTV	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution		Description			Regional Applicability	
Field	Medium-term	I-F: CCTV		Develop an internationally acceptable ITS application specification for exchanging CCTV camera data with a management entity that uses the secure centre-to-field protocol.			Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Traffic Management Center		traffic images	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		ITS Roadway Equipment		video surveillance control	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Maint and Constr Vehicle OBE		traffic images	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Vehicle OBE		ITS Roadway Equipment		video surveillance control	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.		
Other Transportation Information Centers		Transportation Information Center		traffic images	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		Transportation Information Center		traffic images	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Transportation Information Center		Other Transportation Information Centers		traffic images	(None-Data) - NTCIP Messaging	Work on the upper layer standards related to this solution have not been started.		
Issue Description:	Data has been defined for SNMPv1, but needs to be updated to SNMPv3 format.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
ITS Roadway Equipment		Maint and Constr Management Center		traffic images	US: NTCIP CCTV - SNMPv3	NTCIP 1205 data needs to be upgraded to SNMPv3.		
ITS Roadway Equipment		Traffic Management Center		traffic images	US: NTCIP CCTV - SNMPv3	NTCIP 1205 data needs to be upgraded to SNMPv3.		
Maint and Constr Management Center		ITS Roadway Equipment		video surveillance control	US: NTCIP CCTV - SNMPv3	NTCIP 1205 data needs to be upgraded to SNMPv3.		
Traffic Management Center		ITS Roadway Equipment		video surveillance control	US: NTCIP CCTV - SNMPv3	NTCIP 1205 data needs to be upgraded to SNMPv3.		

Class	Field	Timeframe	Medium-term	Proposed Resolution	I-F: Highway advisory radio	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Medium-term	I-F: Highway advisory radio	Develop an internationally acceptable ITS application specification for managing highway advisory radios for secure communications with proper access control.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Vehicle OBE	roadway advisory radio status	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Vehicle OBE	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - Local Broadcast Wireless (AU/EU)	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Vehicle OBE	roadway advisory radio status	(None-Data) - Mobile SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Vehicle OBE	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - Mobile SNMPv3	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - SNMPv1	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - SNMPv1	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - SNMPv1	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - SNMPv1	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - SNMPv1/TLS	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Traffic Management Center	roadway advisory radio status	(None-Data) - SNMPv1/TLS	Work on the upper layer standards related to this solution have not been started.				
Maint and Constr Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - SNMPv1/TLS	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - SNMPv1/TLS	Work on the upper layer standards related to this solution have not been started.				
ITS Roadway Equipment	Maint and Constr Management Center	roadway advisory radio status	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				
Traffic Management Center	ITS Roadway Equipment	roadway advisory radio data	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.				

Class	Field	Timeframe	Medium-term	Proposed Resolution	I-F: Multimodal crossing	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Medium-term	I-F: Multimodal crossing	Develop an internationally acceptable ITS application specification that defines the rules for a centre to inhibit the operation of a multimodal crossing.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Multi-Modal Crossing		Connected Vehicle Roadside Equipment		multimodal crossing status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Multi-Modal Crossing		ITS Roadway Equipment		multimodal crossing status	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Medium-term	I-F: Pedestrian crossing	Develop an internationally acceptable ITS application specification for securely exchanging pedestrian crossing, location, and warning information.				Australia, European Union, United States	
Issue Description:	Required data elements are not defined.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		pedestrian location information	US: NTCIP Traffic Signal - OMG DDS RPC	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
Connected Vehicle Roadside Equipment		ITS Roadway Equipment		pedestrian location information	US: NTCIP Traffic Signal - SNMPv3	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
Issue Description:	Some of the data elements for this information flow are not fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv3	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status	US: NTCIP Traffic Signal - OMG DDS RPC	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - OMG DDS RPC	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - OMG DDS RPC	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
ITS Roadway Equipment		Traffic Management Center		pedestrian safety warning status	US: NTCIP Traffic Signal - SNMPv1/TLS	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv1/TLS	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
ITS Roadway Equipment		Connected Vehicle Roadside Equipment		pedestrian crossing status	US: NTCIP Traffic Signal - SNMPv3	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		
Traffic Management Center		ITS Roadway Equipment		pedestrian safety warning control	US: NTCIP Traffic Signal - SNMPv3	The standards support basic detection of pedestrians, but do not suport monitoring pedestrian location in crosswalks or define the displays and warnings to send to drivers when pedestrians are occupying a cross walk.		

Class	Field	Timeframe	Medium-term	Proposed Resolution	I-F: Update ESS (non-critical)	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Medium-term	I-F: Update ESS (non-critical)	Update NTCIP 1204 to enable the representation of accuracy of sensor data so that external systems are able to determine if the data is accurate enough.				Australia, European Union, United States	
Issue Description:	The standard is missing accuracy requirements for some of its data, which may result in anomalous behaviour.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Emissions Management Center	air quality sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Maint and Constr Management Center	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
Maint and Constr Vehicle OBE	Connected Vehicle Roadside Equipment	environmental sensor data	US: NTCIP Environmental Sensors - WAVE SNMPv3	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
Connected Vehicle Roadside Equipment	Maint and Constr Vehicle OBE	environmental sensor data	US: NTCIP Environmental Sensors - Local Broadcast Wireless (US)	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
Maint and Constr Vehicle OBE	Connected Vehicle Roadside Equipment	environmental sensor data	US: NTCIP Environmental Sensors - Local Broadcast Wireless (US)	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
Maint and Constr Vehicle OBE	Maint and Constr Management Center	environmental sensor data	US: NTCIP Environmental Sensors - Mobile Internet (US)	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
Maint and Constr Vehicle OBE	Maint and Constr Management Center	environmental sensor data	US: NTCIP Environmental Sensors - Mobile SNMPv1/TLS	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
Maint and Constr Vehicle OBE	Maint and Constr Management Center	environmental sensor data	US: NTCIP Environmental Sensors - Mobile SNMPv3	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	environmental sensor data	US: NTCIP Environmental Sensors - OMG DDS RPC	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Emissions Management Center	air quality sensor data	US: NTCIP Environmental Sensors - OMG DDS RPC	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Maint and Constr Management Center	environmental sensor data	US: NTCIP Environmental Sensors - OMG DDS RPC	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Traffic Management Center	environmental sensor data	US: NTCIP Environmental Sensors - OMG DDS RPC	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Emissions Management Center	air quality sensor data	US: NTCIP Environmental Sensors - SNMPv1	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Maint and Constr Management Center	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Traffic Management Center	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Traffic Management Center	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv1/TLS	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Connected Vehicle Roadside Equipment	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv3	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Emissions Management Center	air quality sensor data	US: NTCIP Environmental Sensors - SNMPv3	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Maint and Constr Management Center	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv3	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
ITS Roadway Equipment	Traffic Management Center	environmental sensor data	US: NTCIP Environmental Sensors - SNMPv3	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				
Connected Vehicle Roadside Equipment	Maint and Constr Vehicle OBE	environmental sensor data	US: NTCIP Environmental Sensors - WAVE SNMPv3	NTCIP 1204 does not provide accuracy data related to the sensor readings; this is needed by systems so that they know what the data can be used for.				



Class	Vehicle-Local	Timeframe	Medium-term	Proposed Resolution	V-L: Electrical charging	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Medium-term	V-L: Electrical charging	Develop an internationally acceptable ITS application specification, including payment for services, for a vehicle to interface with an RSE as a part of an electric charging application.				Australia, European Union, United States	
Issue Description:	The information flow is unclear as to what precisely is needed; the standard may not fully support the needs of the information flow, depending on how it is interpreted.						Severity	Low
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName	Notes			
Personal Information Device		Connected Vehicle Roadside Equipment	service payment information	US: WAVE Tolling - Local Unicast Wireless (US)	Specific data for deployments may need additional data			
Connected Vehicle Roadside Equipment		Vehicle OBE	vehicle payment request	US: WAVE Tolling - WAVE UDP	Specific data for deployments may need additional data			
Connected Vehicle Roadside Equipment		Vehicle OBE	vehicle payment update	US: WAVE Tolling - WAVE UDP	Specific data for deployments may need additional data			
ITS Roadway Payment Equipment		Vehicle OBE	vehicle payment request	US: WAVE Tolling - WAVE UDP	Specific data for deployments may need additional data			
ITS Roadway Payment Equipment		Vehicle OBE	vehicle payment update	US: WAVE Tolling - WAVE UDP	Specific data for deployments may need additional data			
Vehicle OBE		Connected Vehicle Roadside Equipment	service payment information	US: WAVE Tolling - WAVE UDP	Specific data for deployments may need additional data			
Vehicle OBE		ITS Roadway Payment Equipment	service payment information	US: WAVE Tolling - WAVE UDP	Specific data for deployments may need additional data			
Connected Vehicle Roadside Equipment		Vehicle OBE	vehicle payment request	US: WAVE Tolling - WAVE WSMP	Specific data for deployments may need additional data			
Connected Vehicle Roadside Equipment		Vehicle OBE	vehicle payment update	US: WAVE Tolling - WAVE WSMP	Specific data for deployments may need additional data			
Vehicle OBE		Connected Vehicle Roadside Equipment	service payment information	US: WAVE Tolling - WAVE WSMP	Specific data for deployments may need additional data			
Vehicle OBE		ITS Roadway Payment Equipment	service payment information	US: WAVE Tolling - WAVE WSMP	Specific data for deployments may need additional data			
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Medium-term	C-V: Automated lane control data	Develop an internationally acceptable ITS application specification for providing control commands and operating parameters for automated vehicle systems, including platooning operations.				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName	Notes			
Traffic Management Center		Vehicle OBE	automated lane control data	(None-Data) - Mobile Internet (US)	Work on the upper layer standards related to this solution have not been started.			
Traffic Management Center		Vehicle OBE	automated lane control data	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.			

Class	Vehicle-Centre	Timeframe	Medium-term	Proposed Resolution	C-V: EU signal priority/preemption	Regional Applicability	Australia, European Union	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Medium-term	C-V: EU signal priority/preemption	Develop an ITS application specification for a centre to exchange requests and status for signal priority/preemption along a route with a vehicle.				Australia, European Union	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Emergency Management Center		Emergency Vehicle OBE		green wave information	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Emergency Management Center		Emergency Vehicle OBE		green wave information	(None-Data) - Guaranteed Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Emergency Vehicle OBE		Emergency Management Center		green wave request	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Traffic Management Center		Emergency Vehicle OBE		intersection status	AU TRAFF - Mobile Internet (X.509)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Traffic Management Center		Emergency Vehicle OBE		intersection status	EU: Signal Control Messages - Mobile Internet (X.509)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		
Traffic Management Center		Emergency Vehicle OBE		intersection status	US: SAE Signal Control Messages - Mobile Internet (US)	The conditions under which messages are sent; the rules defining which data fields to populate for each condition; and the latency, accuracy, and performance requirements related to these messages are not defined. Note: Application data, minimum requireme		

Class	Vehicle-Centre	Timeframe	Medium-term	Proposed Resolution	C-V: Fleet management	Regional Applicability	Australia, European Union, United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Medium-term	C-V: Fleet management	Develop an ITS application specification for managing fleet vehicles, including managing the location of fleet vehicles such as emergency vehicles and transit vehicles				Australia, European Union, United States	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName		Notes		
Vehicle OBE		Service Monitor System	OBE status	(None-Data) - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Personal Information Device		Service Monitor System	PID status	(None-Data) - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Emergency Vehicle OBE		Emergency Management Center	emergency vehicle tracking data	(None-Data) - Mobile Internet (X.509)		Could be based on CAM, DENM, or TPEG-TEC		
Emergency Vehicle OBE		Emergency Management Center	emergency vehicle tracking data	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Personal Information Device		Service Monitor System	PID status	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Vehicle OBE		Service Monitor System	OBE status	(None-Data) - Mobile Internet (X.509)		Work on the upper layer standards related to this solution have not been started.		
Personal Information Device		Service Monitor System	PID status	(None-Data) - Mobile SNMPv3		Work on the upper layer standards related to this solution have not been started.		
Emergency Vehicle OBE		Emergency Management Center	emergency vehicle tracking data	US: SAE Other J2735 - Mobile Internet (US)		Work on the upper layer standards related to this solution have not been started.		
Issue Description:	Required data elements are not defined.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName		Notes		
Emergency Vehicle OBE		Emergency Management Center	emergency vehicle tracking data	(None-Data) - Mobile Internet (X.509)		Could be based on CAM, DENM, or TPEG-TEC		
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName		Notes		
Emergency Vehicle OBE		Emergency Management Center	emergency vehicle tracking data	US: SAE Other J2735 - Mobile Internet (US)		A port number has not been assigned to this message set.		
Emergency Vehicle OBE		Emergency Management Center	emergency vehicle tracking data	US: SAE Other J2735 - Mobile Internet (US)		Application-level authentication not provided		
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName		Notes		
Emergency Vehicle OBE		Emergency Management Center	emergency vehicle tracking data	(None-Data) - Mobile Internet (X.509)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Emergency Vehicle OBE		Emergency Management Center	emergency vehicle tracking data	US: SAE Other J2735 - Mobile Internet (US)		SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Medium-term	C-V: Routing of emergency vehicles	Develop an acceptable ITS application specification for a center to provide suggested routes to emergency vehicles during emergency response, specifically considering TPEG2, which already claims support for this feature.				United States	
Issue Description:	The document may be publicly available but it is not currently available as a formal standard and details may change prior to adoption as a standard.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination	Flow	SolutionName		Notes		
Emergency Management Center		Emergency Vehicle OBE	suggested route	US: SAE J3067 (J2735 SE) - Mobile Internet (US)		SAE J3067 is only an informational report, not a standard. It is a preliminary resource that may be used to facilitate enhancements and extensions to SAE J2735, but significant technical changes may occur prior to full standardization.		

Class	Vehicle-Centre	Timeframe	Medium-term	Proposed Resolution	C-V: Update central map database	Regional Applicability	Australia, European Union, United States, Japan	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Centre	Medium-term	C-V: Update central map database	Develop an internationally acceptable ITS application specification that defines the rules for updating a central map database, including roadway and intersection geometry, based on real-world data readings from vehicles and transmitted to a map update system.				Australia, European Union, United States, Japan	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Connected Vehicle Roadside Equipment		Map Update System		vehicle location data for mapping	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Map Update System		vehicle location data for mapping	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Map Update System		vehicle location data for mapping	(None-Data) - Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Vehicle OBE		Map Update System		vehicle location and motion for mapping	(None-Data) - Mobile Internet (X.509)	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Map Update System		vehicle location data for mapping	(None-Data) - OMG DDS RPC	Work on the upper layer standards related to this solution have not been started.		
Connected Vehicle Roadside Equipment		Map Update System		vehicle location data for mapping	(None-Data) - SNMPv3	Work on the upper layer standards related to this solution have not been started.		
Issue Description:	There are ambiguities as to how to (or if one should) couple the upper-layer standards defined in this solution with the indicated lower-layer standards.						Severity	High
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Vehicle OBE		Map Update System		vehicle location and motion for mapping	US: SAE Other J2735 - Mobile Internet (US)	A port number has not been assigned to this message set.		
Vehicle OBE		Map Update System		vehicle location and motion for mapping	US: SAE Other J2735 - Mobile Internet (US)	Application-level authentication not provided		
Issue Description:	The performance rules are not fully defined for this information flow.						Severity	Medium
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
Vehicle OBE		Map Update System		vehicle location and motion for mapping	(None-Data) - Mobile Internet (X.509)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Vehicle OBE		Map Update System		vehicle location and motion for mapping	US: SAE Other J2735 - Mobile Internet (US)	SAE J2945/x standards have not yet been proposed for the CSR, PDM, PVD, Test, NMEA, RTCM, and ICA messages		
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Future	I-F: Speed enforcement	Develop an internationally acceptable ITS application specification for the use case of allowing a center to remotely control a speed enforcement application within ITS Roadway Equipment.				Australia, European Union	
Issue Description:	Performance, functionality, and the upper-layers of the OSI stack have not been defined for this information flow.						Severity	Ultra
Relevant Flow Solution Combinations								
Source		Destination		Flow	SolutionName	Notes		
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - AU IFCP	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Maint and Constr Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
ITS Roadway Equipment		Traffic Management Center		speed monitoring information	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Maint and Constr Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		
Traffic Management Center		ITS Roadway Equipment		speed monitoring control	(None-Data) - EU-ICIP-C2F	Work on the upper layer standards related to this solution have not been started.		



Class	Field	Timeframe	Future	Proposed Resolution	I-F: US signal control coordination	Regional Applicability	United States	
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Field	Future	I-F: US signal control coordination	Develop an ITS application specification for peer-to-peer, secure traffic signal coordination with preemption and priority for authorized vehicles.				United States	
Issue Description:	The specific dialogs for exchanging this data have not been fully defined.						Severity	Medium
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control coordination	DDS: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control coordination	DDS: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.				
Other ITS Roadway Equipment	ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - OMG DDS RPC	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.				
ITS Roadway Equipment	Other ITS Roadway Equipment	signal control coordination	US: NTCIP Traffic Signal - SNMPv3	Generic SNMP dialogs exist, but the complex logic of how individual GET and SET operations are used is not defined.				
Class	Timeframe	Proposed Resolution	Description				Regional Applicability	
Vehicle-Local	Future	V-L: Update J2735 for hazmat sensors	Update SAE J2735 to include data concepts for on-board hazmat sensors.				United States	
Issue Description:	The information flow is unclear as to what precisely is needed; the standard may not fully support the needs of the information flow, depending on how it is interpreted.						Severity	Low
Relevant Flow Solution Combinations								
Source	Destination	Flow	SolutionName	Notes				
Commercial Vehicle OBE	Emergency Management Center	hazmat spill notification	US: SAE J3067 (J2735 SE) - Guaranteed Mobile Internet (US)	Does not define data for hazmat sensors that detect the release of hazmat materials				