



Identifying ITS Opportunities for the HA Standards Newsletter: December 2009

■ ITS RADAR INTERNATIONAL PROJECT

This project is providing intelligence for the Highways Agency on ITS developments in Europe and around the world. It is carried out by TRL and AECOM on behalf of the HA. The project summarises key information for decision makers and practitioners on activities related to Intelligent Transport Systems (ITS). The project covers specific areas of key interest to the HA.

Regular newsletters are being produced, covering information which is in the public domain. For more information about the project and the services provided, the web site can be reached at: www.highways.gov.uk/itsradar.

To contact us and let us know what you would like this project to deliver please email us at: ITSRadarInternational@trl.co.uk

■ ABOUT STANDARDS

A standard is a technical specification or report that is developed with consensus across industry and is then approved by a body recognised at the national or international level. Standards specify how systems, products and services should operate. Standards should facilitate inter-operability without impeding innovation as new technologies and approaches develop.

ITS Radar International aims to keep the HA informed on developments in standards relevant to ITS, at a national (British Standards Institution, BSI), European (Comité de Européen Normalisation, CEN, and European Telecommunications Standards Institute, ETSI) and international (International Organisation for Standardisation, ISO) level.

A document will be periodically maintained, which tracks the progress of new and developing standards, as well as listing published standards with any updates or reviews. The ITS Standards Spreadsheet can be downloaded from www.itsradarinternational.info/. The main ITS technical committees are:

- ISO TC 204 Technical Committee – Intelligent Transport Systems
- CEN TC 278 Technical Committee – Road Transport & Traffic Telematics
- ETSI TC ITS Technical Committee – Intelligent Transport Systems

These and other relevant bodies are regularly monitored for developments.

In addition, the project provides information about agreements, protocols, common approaches and guidelines relevant to ITS in the Highways Agency, such as location referencing and data exchange.

■ MEETINGS

New “Co-operative Systems” working groups progress – Next CEN TC 278 WG 16 Meeting; ISO TC 204 WG 18 created

Source: CEN

The new European CEN working group for co-operative systems is to hold its next meeting on 8-10 December 2009. Progress of CEN TC 278 Working Group 16 has involved several meetings with other organisations, since the announcement of its creation in [March](#):

- The inaugural meeting was held in London on 9 September, 2009
- A report was given at the CEN TC 278 Convenor and Plenary Meeting on 10-11 September
- A liaison report was delivered at the ISO TC 204 Convenor / Head Of Delegation (C/HOD) Meeting and the ISO TC 204 Plenary Meeting in Barcelona on 17-18 September
- At the ITS World Congress in Stockholm, there were several meetings and discussions with the EC, the US DOT, ERTICO, ITS Japan
- In Brussels on 23 October, discussions were held at a meeting of the ITS Steering Group (ITSSG). ITSSG is a working group of the ICT Standards Board (ICTSB), which is a joint initiative of CEN, CENELEC and ETSI.

Particular focus has been given to discussions with ETSI TC ITS on how to co-operate in fulfilling the demands included in the [recent EC Standardisation Mandate](#) to prepare a coherent set of standards, specifications and guidelines to support the implementation and deployment of co-operative systems in Europe, in alignment with the [EC ITS Action Plan](#). A draft document discusses these efforts: “CEN TC278/WG16 and ISO TC204/WG18 Terms of Reference and Preliminary Work Items and CEN, ISO, ETSI-Cooperation in the Field of Cooperative ITS Systems Standardisation”.

The purpose of the meeting on 8 December is to discuss CEN matters, and the meeting on 9-10 December is to be a joint meeting with ISO TC 204 WG 16. Discussions will include the recent creation of a new ISO TC 204 Working Group, WG 18, also called “Co-operative Systems”. See www.isotc204wg16.org/ for further information.

See www.itsradarinternational.info/ for related articles.

ITS Radar International will continue to monitor developments in co-operative systems

2nd ETSI TC ITS Workshop to be held on 10-12 February 2010

Source: www.etsi.org/, portal.etsi.org/

The ETSI Technical Committee for ITS (TC ITS) is to hold its second workshop 10-12 February 2010 at its offices in the South of France. The topics to be discussed are:

- The European Commission Mandate on ITS (see the [November Newsletter](#) for further information)

- ETSI and international status of ITS related standardisation
- Research activities from a global perspective
- Deployment of co-operative systems

The standardisation activities of ETSI TC ITS are focused on wireless communications for vehicle-to-vehicle and vehicle-to-roadside communications, with the goal of reducing road fatalities and injuries and improving traffic efficiency.

According to the website, www.etsi.org/, the ETSI TC ITS Workshop will involve the following:

- "A thorough overview of the ITS related standards published so far
- workshop/panel discussions on ongoing activities in ETSI TC ITS
- international standardisation activities on co-operative systems
- various ways to deploy co-operative systems... this will include addressing the inclusion of infrastructure based networks and applications as well as business models, with specific reference to the corresponding standardisation
- experiences from research projects and field operational tests will be discussed within a global perspective
- an analysis will be made of how the current expertise in co-operative systems standardisation could be used for other ITS domains such as train management systems, eCustoms, eFreight and the inclusion of pedestrians."

The website places emphasis on the need of international co-operation in order to achieve global interoperability, and this has "advanced well". Furthermore, "a first set of related standards has been published... some stakeholders have started implementing this technology, with deployment and availability of such systems set to become a reality".

Participation in the workshop is free and open to everybody upon registration. Further details will be announced through the ETSI ITS Newsletter; it is possible to subscribe to this newsletter [here](#).

HA recommended to consider attending

ITS Radar International will continue to monitor developments in ETSI TC ITS

eSafety recent meetings and documents

Source: ec.europa.eu/

There have been two recent eSafety meetings: the 37th eSafety Forum Steering Group Meeting and the 12th eSafety Forum Plenary meeting.

eSafety is a joint initiative of the European Commission, industry and other stakeholders. It aims to accelerate the development, deployment and use of Intelligent Vehicle Safety Systems that use information and communication technologies to increase road safety and reduce the number of accidents on Europe's roads.

The 37th eSafety Forum Steering Group Meeting was held on 6 October 2009, Brussels. The minutes can be downloaded from ec.europa.eu/. A Flash Report on the ITS World Congress in Stockholm was distributed, which can also be downloaded from ec.europa.eu/.

The 12th eSafety Forum Plenary meeting was held on 29 October and was billed as "The eCall summit: Time for deployment". Presentations and minutes can be downloaded from ec.europa.eu/.../20091029_ecall_summit. An article about the outcome of the summit can be found in the [ITS Radar International Policy News](#).

■ CALLS FOR PROPOSALS

None to report

■ HOT TOPICS

None to report

■ PROJECTS

None to report

■ RECENT PUBLICATIONS

INSPIRE Data Specification for Transport Networks published

Source: inspire.jrc.ec.europa.eu/

The third version of the INSPIRE Data Specification on Transport Networks has been finalised and published. The document can be downloaded from inspire.jrc.ec.europa.eu/.

This version (v3.0.1) provides:

- the basis for the development of the Implementing Rule, related to the spatial data theme of Transport Networks
- the implementation guidelines that will accompany the Implementing Rule on the Interoperability of Spatial Data Sets.

INfrastructure for SPatial InfoRmation in the European community (INSPIRE), is an EC Directive concerning the sharing and harmonisation of spatial datasets across Europe. INSPIRE has considerable implications for the Highways Agency and other UK road administrations, because such organisations will be required to create standardised metadata (descriptions of the spatial data), as well as having to provide access to data that has been collected or created in standard form.

The extensive data specification has been prepared by the INSPIRE Thematic Working Group Transport Networks (TWG-TN), a multinational team of experts in the field drawn from different parts of the European Union. This version of the data specification has been compiled from reference material submitted by the Spatial Data Interest Communities (SDICs) and Legally Mandated Organisation (LMOs) of INSPIRE, plus the responses to the User Requirements Survey.

The [INSPIRE website](#) says that:

"[This document] will supplement the Implementing Rule for Interoperability of Spatial Data Sets and Services and allow for preparation for implementation. Together with the relevant materials (GML application schemas, UML models and registries), [it] will support the implementation and provide a better understanding of the requirements of the Implementing Rule."

The data specifications have been published for all Annex I Data Themes, which includes Transport Networks. A call has been issued to SDICs and LMOs for participation in the development of INSPIRE Data Specifications for Annex II and III Themes.

See www.itsradarinternational.info/ for related articles.

ITS Radar International will continue to monitor developments in INSPIRE

Road safety special edition of ISO Focus Magazine – ISO 39001 Road Traffic Safety Management Systems – eCall standardisation progress

Source: www.iso.org/iso/main-focus_oct2009.pdf, www.iso.org/

The October 2009 issue of ISO Focus Magazine has been published to coincide with the United Nations First Global Ministerial Conference on Road Safety, which was held on 19-20 November 2009 in Moscow, Russia. The special edition, "On the Road to Safety", looks at how ISO is helping to address this global problem.

A particular topic that is discussed at length is ISO 39001, "Road-traffic Safety management systems - Requirements with guidance for use". This is currently the only work item in ISO PC 241, the Project Committee for Road-Traffic Safety Management System.

Dr. Mark Rosenberg, Director of the Global Road Safety Forum, writes:

"The future ISO 39001 will provide guidance on developing, nurturing, and sustaining a management system for road traffic safety, and will therefore go a very long way to stopping the current epidemic of road traffic deaths, an epidemic that is out of control and quickly getting worse in developing countries."

Prof. Claes Tingvall, Chairman of the European New Car Assessment Programme (Euro NCAP) and also Chair of ISO PC 241 says:

"If we can achieve the same success with ISO 39001 as we have with, for example ISO 14001, we can look forward to a major breakthrough of traffic safety across the world."

Other contributors include:

- United Nations Economic Commission for Europe (Eva Molnar)
- World Health Organization (Dr. Etienne Krug)
- Organisation for Economic Co-operation and Development / International Transport Forum (Eric Howard)
- World Bank (Tony Bliss)
- Transport Canada (Dr. Kash Ram)

- Johnson & Johnson (Gabriel Kardos)
- International Road Federation (Hilton Vorster)
- Institute of Road Traffic Education, India (Dr. Rohit Baluja)
- Vectura Consulting AB (Hans Skalin).

An article by Bob Williams, Convenor of CEN TC 278 WG 15, gives an overview of the progress of eCall standardisation (pages 36-37):

“In Europe, the ‘minimum set of data’ is specified in the European Committee for Standardisation (CEN) technical specification CEN/TS 15722:2009...

Developed by ISO technical committee ISO/TC 204, Intelligent transport systems, ISO 24978 will help make information provided by the vehicle understandable at the point of reception by the emergency and rescue services.

In Europe, it is envisaged that there will be both a pan-European system based on the use of mobile cell phone telephony and the 112 emergency number system, and a third party support system for vehicles that are already equipped with commercial support communication systems – where the third-party service provider may use different means to connect to the vehicle, sense and receive incident information, filter out non-emergency calls, and will connect relevant calls to the emergency services and provide them with the minimum set of data, and establish a voice link between the emergency operator and the occupants.

Standards are therefore necessary to establish the operating requirements for both the pan-European eCall system and for third-party support. High-level application protocols are also required to make the system work. Standards for these three areas are at an advanced stage of development for Europe. In the future, these may be proposed to ISO as a basis for the development of international standards on eCall, where it would be necessary to also take into account the different approaches to the network support in other countries.”

Automotive Safety Integrity Levels – Draft of ISO 26262 published

Source: www.iso.org/, conferences.theiet.org/, www.itsinternational.com/

The ISO standard for functional safety in road vehicles is now available for review as a Draft International Standard (DIS). This is a landmark standard for vehicle manufacturers and the automotive sector, because it formalises the methods for using “Safety Integrity Levels (SILs)” in the system design phase of cars. SILs specify the ‘amount of design effort’ that is required for components in the vehicle that have a safety function.

An article in ITS International states that:

“Although the current iteration of ISO 26262 concentrates on discrete safety systems, such as stability control, future iterations will also look at interaction cooperative infrastructures. Infrastructure stakeholders are therefore being encouraged to get involved in the consultation process which will lead to a finalised standard.”

SILs are determined through a risk assessment approach, by identifying and classifying hazards. SILs originated in the process industries through ISO/IEC 61508:1998 and have been applied to other industries. The UK-based MISRA Guidelines attempted to adapt SILs to the automotive sector, and now ISO 26262 represents the formalised international version of MISRA.

The Framework Architecture and Classification for ITS (FACITS) Project, which was funded by InnovITS, proposed a similar procedure for all ITS. The FACITS process uses integrity levels as part of an ITS risk assessment that involves all ITS stakeholders. An overview of the FACITS Process can be found here: www.innovits.com/its-ktn/.

The 5th IET Seminar on SIL Determination was held on 3 December 2009, which included a talk on the new ISO 26262 standard. Further information can be found at the source links above.

Article on international progress towards common standards for co-operative road infrastructures

Source: www.itsinternational.com/

An article in the September / October 2009 Issue of ITS International (pages 56-57) discusses the challenges and progress in creating standards to support co-operative systems at the international level.

It discusses the example of 5.9 GHz-based ITS, where three groups of standardisation bodies are currently developing standards:

- "IEEE is working on 802.11p, a version of the popular WiFi specifications...
- In Europe ETSI is working on car-to-car multi-hopping and geo-addressing standards and CEN TC 278 has recently started working on safety and co-operative applications...
- ISO TC 204 Working Group 16 has written dozens of standards supporting the CALM protocol ... and the high-level goal is to provide wide-area communications for ITS applications that work equally well regardless of the communications medium."

It identifies the key issue:

"The problem is that all of these groups are developing a full set of standards covering all aspects of 5.9 GHz protocol. There are big overlaps in scope and a lot of wasted effort... there is almost no interoperability in the current set of specifications..."

It then suggests the way forward:

"The goal is to get them to agree on a common approach. We must agree a standard architecture and then focus the efforts of each organisation on the areas they are most suited for... Further partitioning of the work is required in order to avoid overlap and waste..."

The article cites research projects as evidence that the technology is now ready for deployment, such as the European CVIS and SAFESPOT and the American IntelliDrive (VII).

ITS Radar International Standards Tracking Spreadsheet updated – December 2009

Source: www.iso.org/, www3.nen.nl/cen278/

The 'ITS Standards Spreadsheet' that is maintained by ITS Radar International has been updated and can be downloaded [here](#).

Standards published since September 2009:

ISO TC 204, WG 1 - ISO 14813-6:2009, Published
Intelligent transport systems -- Reference model architecture(s) for the ITS sector -- Part 6: Data presentation in ASN.1

ISO TC 204, WG 3 - ISO 17267:2009, Published
Intelligent transport systems -- Navigation systems -- Application programming interface (API)

ISO TC 204, WG 4 - ISO 17264:2009, Published
Intelligent transport systems -- Automatic vehicle and equipment identification -- Interfaces

ISO TC 204, WG 5 - ISO/TS 12813:2009, Published
Electronic fee collection -- Compliance check communication for autonomous systems

ISO TC 204, WG 5 - ISO/TS 17574:2009, Published
Electronic fee collection - Guidelines for security protection profiles

ISO TC 204, WG 16 - ISO 24978:2009, Published
Intelligent transport systems -- ITS Safety and emergency messages using any available wireless media -- Data registry procedures

ISO TC 204, WG 16 - ISO 25111:2009, Published
Intelligent transport systems -- Communications access for land mobiles (CALM) -- General requirements for using public networks

ETSI TC ITS, WG 2 - TS 102 760-Parts 1-2 Ver. 1.1.1, ITS-0020008/09, Published
Intelligent Transport Systems (ITS); Test specifications for Intelligent Transport Systems; Communications Access for Land Mobiles (CALM); Medium Service Access Points (ISO 21218); Part 1: Implementation Conformance Statement (ICS) proforma; Part 2: Test Suite Structure and Test Purposes (TSS&TP)

New Projects since September 2009:

ISO TC 204, WG 8 - ISO/NP TR 24014-3, New Project
Public transport -- Interoperable fare management system -- Part 3: Interoperability within a multi-application environment

ISO TC 204, WG 14 - ISO/NP 26684, New Project
Cooperative Intersection Signal Information and Violation Warning Systems (CISIVWS)

CEN TC 278, WG 1 - Work Item 278257, Active
Electronic fee collection - Conformity evaluation of equipment to CEN ISO/TS 17575-1 - Part 1: Test suite structure and test purposes

CEN TC 278, WG 1 - Work Item 278258, Active
Electronic fee collection - Conformity evaluation of equipment to CEN ISO/TS 17575-2 - Part 1: Test suite structure and test purposes

CEN TC 278, WG 1 - Work Item 278259, Active
Electronic fee collection - Value added services based on EFC on-board equipment

CEN TC 278, WG 3 - Work Item 278261, Preliminary
Public transport - European ticketless and ticket on departure for rail distribution

CEN TC 278, WG 3 - Work Item 278260, Preliminary
Public transport - Network and Timetable Exchange (NeTEx)

CEN TC 278, WG 4 - Work Item 278262, Preliminary
Traffic and Travel Information (TTI) - TTI via Transport Protocol Expert Group (TPEG) - Second generation (TPEG 2) multipart series

CEN TC 278, WG 16 - Work Item 278266, Preliminary
Intelligent transport systems - Co-operative systems - Classification and management of ITS applications in a global context

CEN TC 278, WG 16 - Work Item 278267, Preliminary
Intelligent transport systems - Co-operative systems - Co-operative system application messages, protocols and profiles

CEN TC 278, WG 16 - Work Item 278269, Preliminary
Intelligent transport systems - Co-operative systems - Definition of local dynamic map concept

CEN TC 278, WG 16 - Work Item 278268, Preliminary
Intelligent transport systems - Co-operative systems - ITS application requirements for automatic selection of communication interfaces

ETSI TC ITS, WG 1 - TR 102 863, ITS-0010006, Under Development
Intelligent Transport System (ITS); Vehicular Communications; Basic Set of Applications; Local Dynamic Map (LDM); Rationale for and guidance on standardization;

ETSI TC ITS, WG 1 - TS 102 868-Parts 1-3, ITS-0010007-1/2/3, Under Development
Intelligent Transport System (ITS); Testing; Conformance test specification for Co-operative Awareness Messages (CAM); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma; Part 2: Test Suite Structure and Test Purposes (TSS&TP); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TC ITS, WG 1 - TS 102 869-Parts 1-3, ITS-0010008-1/2/3, Under Development
Intelligent Transport System (ITS); Testing; Conformance test specification for Decentralized environmental Notification Messages (DNM); Part 1: Test requirements and Protocol Implementation Conformance Statement (PICS) proforma; Part 2: Test Suite Structure and Test Purposes (TSS&TP); Part 3: Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT).

ETSI TC ITS, WG 1 - ITS-0010004, Under Development
Intelligent Transport System (ITS); Users & Applications requirements;
Facility layer structure, functional requirements and specifications;

ETSI TC ITS, WG 1 - ITS-0010005, Under Development
Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of
Applications; Local Dynamic Map (LDM) Specification

ETSI TC ITS, WG 3 - TS 102 859-Parts 1-3, ITS-0030017/09/16, Under
Development
Intelligent Transport Systems (ITS); Testing; Conformance test specifications
for Transmission of IP packets over Geonetworking; Part 1: Test requirements
and Protocol Implementation Conformance Statement (PICS) proforma, Part
2: Test Suite Structure and Test Purposes (TSS&TP); Part 3: Abstract Test
Suite (ATS) and Protocol Implementation eXtra Information for Testing
(PIXIT).

ETSI TC ITS, WG 3 - TS 102 870-Parts 1-3, ITS-0030011/12/10, Under
Development
Intelligent Transport Systems (ITS); Testing; Conformance test specifications
for Geonetworking Basic Transport Protocol (BTP); Part 1: Test requirements
and Protocol Implementation Conformance Statement (PICS) proforma; Part
2: Test Suite Structure and Test Purposes (TSS&TP); Part 3: Abstract Test
Suite (ATS) and Protocol Implementation eXtra Information for Testing
(PIXIT)

ETSI TC ITS, WG 3 - TS 102 871-Parts 1-3, ITS-0030014/15/13, Under
Development
Intelligent Transport Systems (ITS); Testing; Conformance test specifications
for Geonetworking ITS-G5; Part 1: Test requirements and Protocol
Implementation Conformance Statement (PICS) proforma; Part 2: Test Suite
Structure and Test Purposes (TSS&TP); Part 3: Abstract Test Suite (ATS) and
Protocol Implementation eXtra Information for Testing (PIXIT)

ETSI TC ITS, WG 4 - TR 102 861, ITS-0040020, Under Development
Intelligent Transport Systems (ITS); STDMA recommended parameters and
settings for cooperative ITS

ETSI TC ITS, WG 4 - TR 102 862, ITS-0040021, Under Development
Intelligent Transport Systems (ITS); Performance evaluation of Self-
organising Time Division Multiple Access as Medium Access Control method
applied to ITS cooperative systems in road traffic scenarios

ETSI TC ITS, WG 4 - ITS-0040019, Under Development
Intelligent Transport Systems (ITS); VHF/UHF ITS communications protocol

ETSI TC ITS, WG 5 - ITS-0050010, Under Development
Intelligent Transport Systems (ITS); Security; Identity Management and
Identity Protection in ITS

ETSI TC ITS, WG 5 - ITS-0050011, Under Development
Intelligent Transport Systems (ITS); Security; Guide to Identity Management
in ITS

ETSI TC ITS, WG 5 - ITS-0050012, Under Development
Intelligent Transport Systems (ITS); Security; Guide to the communications regulation environment for ITS

ITS Radar International will continue to update the tracker quarterly

■ GLOSSARY

BSI	British Standards Institution
C/HOD	Convenor / Head Of Delegation
CEN	(Comité Européen de Normalisation): European Committee for Standardisation
CEN TC 278	CEN Technical Committee for Road Transport & Traffic Telematics
CENELEC	CENELEC (Comité Européen de Normalisation Electrotechnique): European Committee for Electro-technical Standardisation
CVIS	(Cooperative Vehicle-Infrastructure Systems): A European research and development project aiming to design, develop and test the technologies needed to allow cars to communicate with each other and with the nearby roadside infrastructure.
DIS	Draft International Standard
EC	European Commission
ERTICO	A multi-sector, public/private partnership created to develop and deploy ITS
eSafety Forum	A joint platform involving all road safety stakeholders, which promotes and monitors the implementation of the recommendations identified by the eSafety Working Group
ETSI	European Telecommunications Standards Institute
ETSI TC ITS	ETSI Technical Committee for Intelligent Transport Systems
Euro NCAP	European New Car Assessment Programme
FACITS	(Framework Architecture and Classification for Intelligent Transport Systems): Project by innovITS with the aim of developing a common ITS risk assessment procedure, and exploring the sharing of components between different ITS applications and functions.
GML	(Geography Mark-up Language): A spatially enabled dialect of XML schema. It was developed by the Open GIS Consortium (OGC), a global organisation of developers and users that aims to maximise the benefit of geographic information. GML can be considered as a worldwide standard language for the production and distribution of geographic data.
ICTSB	(ICT Standards Board): A joint initiative of CEN, CENELEC and ETSI to co-ordinate specification activities in the field of ICT.
IEEE	Institute of Electrical and Electronic Engineers
IET	Institution of Engineering and Technology

InnovITS	UK centre for Excellence for Intelligent Transport Systems and Services, funded by BERR.
INSPIRE	(INfrastructure for SPatial InfoRmation in the European community): EC Directive concerning the sharing and harmonisation of spatial datasets across Europe.
IntelliDrive	US DOT initiative that describes itself as "A suite of technologies and applications that use wireless communications to provide connectivity that can deliver transformational safety, mobility, and environmental improvements in surface transportation". Formerly known as Vehicle-Infrastructure Integration (VII).
ISO	International Organisation for Standardisation
ISO PC 241	ISO Project Committee for Road-Traffic Safety Management System
ISO TC 204	ISO Technical Committee for Intelligent Transport Systems
ITS	(Intelligent Transport Systems): "The integration of information and communications technology with transport infrastructure, vehicles and users" [ERTICO].
ITSSG	(ITS Steering Group): A working group of the ICTSB focusing on ITS standards.
LMO	Legally Mandated Organisation
SAFESPOT	FP6 Project identifying how intelligent vehicles and intelligent roads can cooperate to produce a breakthrough for road safety.
SDIC	Spatial Data Interest Community
SIL	Safety Integrity Level
TWG-TN	INSPIRE Thematic Working Group for Transport Networks
UML	Unified Modelling Language
US DOT	US Department Of Transport
WG	Working Group
WiFi	(Wireless Fidelity): Trademark of the Wi-Fi alliance that represents equipment certified for interoperability for different wireless devices