



Identifying ITS Opportunities for the HA Standards Newsletter: February 2010

■ 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

First User Forum for DATEX II 16 - 17 March 2010

Source: www.datex2.eu/

The first DATEX II User Forum is to be held in Berlin on the 16 and 17 March 2010.

DATEX II is a set of specifications for dynamic traffic and travel related information in Europe. For further information see www.datex2.eu and www.itsradarinternational.info/.

HA recommended to consider attending

Final GeoNet Workshop held in Paris, January 2010

Source: www.geonet-project.eu/

The final workshop of the European project, GeoNet, was held in Paris on 29 January 2010. The FP7-funded GeoNet project designed, implemented and tested an IPv6 geonetworking architecture.

The GeoNet project worked closely with other co-operative systems projects, such as the Car-2-Car Communication Consortium (C2C-CC), CVIS and Safespot. It took the basic results from the design work of C2C-CC to the next level, by further improving these specifications and creating a baseline software implementation interfacing with the "IPv6" Internet protocol.

GeoNet aimed to

"implement a reference specification of a geographic addressing and routing protocol with support for IPv6 to be used to deliver safety messages between cars but also between cars and the roadside infrastructure... [and] ... to implement and formally test a networking mechanism as a standalone software module which can be incorporated into Cooperative Systems".

The workshop included a live demonstration of IPv6 geonetworking performed on a fleet of vehicles, as well as talks on:

- Why IPv6 geonetworking is needed for ITS
- System design
- Implementation and testing
- Use and dissemination.

The proposed next steps are formal standardisation through recognised bodies, such as ETSI and ISO.

ITS Radar International will continue to monitor developments

INSPIRE Conference 23-25 June 2010

Source: <http://inspire.jrc.ec.europa.eu>

The INSPIRE Conference 2010 will take place from 23 to 25 June 2010 in Krakow, Poland. The theme of this year's event is "Spatial Data Infrastructure as a Framework for Collaboration" ("SDI"). The topics to be covered include:

- INSPIRE Implementation: Legislative measures, coordination and organisational models
- INSPIRE and the global context: Global Monitoring for Environment and Security, Global Earth Observation System of Systems, United Nations SDI (Spatial Data Infrastructure)
- Thematic communities
- Licensing frameworks
- GeoPortals and registries
- Social and economic impacts
- Education and awareness raising
- Trans-national SDI projects (including EU funded projects)
- New policies, new requirements, new stakeholders
- New and Evolving tools and technologies.

Participation in the INSPIRE Conference is open to all individuals interested in or working in the field of SDI development and implementation. For further information see the source link above.

HA recommended to consider attending

■ CALLS FOR PROPOSALS

None to report

■ HOT TOPICS

INSPIRE Update – Documents approved, Forum up and running

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

Several updates have recently been announced on the INSPIRE Website.

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.

- 14/12/2009 - INSPIRE Implementing Rules on interoperability of spatial data sets and services have been approved by the INSPIRE Committee
- 14/12/2009 - Amendment of the INSPIRE Network Services Regulation for Download and Transformation approved by the INSPIRE Committee
- 03/12/2009 - The INSPIRE Forum, inspire-forum.jrc.ec.europa.eu, is now officially up and running. It aims to be: an open space for the exchange of information relating to INSPIRE; a meeting place to get to know professionals working in different areas; a learning space where tutorials, workshops and presentations can be downloaded.

For further information see inspire.jrc.ec.europa.eu/ and www.itsradarinternational.info/.

ITS Radar International will continue to monitor developments in INSPIRE

Traveller Information Services Association elects new officers

Source: www.ertico.com/

The Traveller Information Services Association (TISA) elected a new President and Treasurer during its General Assembly in Brussels on 3rd December 2009. The incoming President, Jonathan Burr (ITIS, UK) said that he was "happy to be taking over and leading TISA into an important period of further TMC developments and to the first TPEG service implementations in the near future".

Traveller Information Services Association publishes two TPEG specifications

Source: www.ertico.com/

The Traveller Information Services Association (TISA) has recently released two new TPEG specifications.

The standards enable the digital transmission of Traffic and Traveller Information (TTI) via various types of delivery channel, e.g. Digital Radio (DAB), Internet, Digital TV (DVB), GPRS and Wi-Fi etc. TPEG, which stands for Transport Protocol Experts Group (similar to JPEG and MPEG), is defined in two series of standards that were both published in 2006:

- ISO/TS 18234:2006, Parts 1 to 6 – Binary Coding
- ISO/TS 24530:2006, Parts 1 to 4 – Extensible Markup Language (XML)

Both of the series of published standards contain sub-parts, which consider the use of TPEG for various applications. Other sub-parts are also under development for additional applications

The two new TISA specifications are:

- "TPEG Service Framework" Specification - describes the basic capabilities of the TPEG Generation 2 (TPEG2) series of new TISA Specifications for providing a multiplex of TPEG services and applications
- "TPEG Adaptation Layer Profiles, Part 1: Transmission via Digital Audio Broadcast - Packet Mode with Data Groups" Specification - provides a set of requirements to transmit TPEG Transport frames by Digital Audio Broadcast (DAB)

One key feature of TPEG technology is the concept of being "agnostic to bearers" and thus TPEG based services may operate via almost any simple digital data channel. These two specifications can be seen as contributing to this overall aim.

The TPEG Applications Work Group have reached the end of the review cycle, within the TISA community, and are thus close to final submission for standardisation.

For further information see <http://www.tisa.org/> and www.itsradarinternational.info/ .

HA recommended to review the specifications

ITS Radar International will continue to monitor developments in TPEG

■ PROJECTS

None to report

■ RECENT PUBLICATIONS

DATEX II summary document published

Source: www.datex2.eu/

A 9-page summary document for the DATEX II Data Exchange Specifications has been published. The document states that:

“DATEX II has been developed to provide a standardised way of communicating and exchanging traffic information between traffic centres, service providers, other traffic operators and media partners. The specification provides for a harmonised way of exchanging data across boundaries, at a system level, to enable better management of the European road network.”

DATEX II has evolved from the original (now withdrawn) DATEX standards, published in 2000. Due to inter-operability issues and advances in technology, a second generation, DATEX II, was developed under the EC-funded 'D2' Project.

The D2 Project published Version 1.0 of the DATEX II specifications in December 2006. The model has since been substantially revised, based on feedback from a wide range of stakeholders, and the DATEX II v2.0 specifications were published in June 2009.

This set now forms the basis of the current submission to CEN for formal standardisation of the principal elements of DATEX II. The specification set can be downloaded from www.datex2.eu following free registration.

The contents of the summary document include:

- “A tool to meet the ITS interface challenge
- List & Description of main uses
- Exchange between traffic centres and to service providers
- Brief history
- ITS Action Plan
- DATEX II – testimonials from users
- DATEX II – the content
- DATEX II – the options
- DATEX II – the applications
- DATEX II – the description

- DATEX II – the organisation”

The document can be downloaded here:

www.datex2.eu/.../DATEX_II_key_to_information_exchange.pdf

For further information see www.datex2.eu and

www.itsradarinternational.info/.

HA recommended to review the summary

ITS Radar International will continue to monitor developments in DATEX II

Article: “Intellidrive Update” – US co-operative systems initiative reports on communication standard SAE J2735

Source: www.transportation.org/

The October 2009 Issue of “Intellidrive Update”, the newsletter of the American co-operative systems initiative, has an article on interoperability and the SAE J2735 communication standard (page 9).

The SAE J2735 standard has been developed by American standardisation body, SAE International (formerly the Society of Automotive Engineers). It is at the final ballot stage and soon to be published, to be followed by final validation through field testing.

The article states that:

“SAE J2735 is an essential component in supporting interoperability, or ensuring that vehicles and roadside equipment are all speaking the same language. SAE J2735 defines message sets, data-frames and data-elements used by applications to exchange data over the Dedicated Short Range Communications (DSRC) / WAVE, as well as other communication protocols.”

It discusses the use of the standard in vehicle-to-vehicle collision avoidance applications. To read the article, see www.transportation.org/.

For more information on the standard, see the US DOT Factsheet, www.standards.its.dot.gov/, and also the Intellidrive homepage: www.intellidriveusa.org/.

Keywords: Communications, Cooperative vehicle systems, Safety, Standard

Article: “Creating consistency in the European telematics market” – Next Generation Telematics Protocol

Source: social.telematicsupdate.com/ .

An article on social.telematicsupdate.com/ discusses various approaches to standardisation of “In-Vehicle Infotainment” (IVI).

It suggests that rather than formal standardisation, often “one or more major players pushing ahead with a proprietary solution, which then evolves into a de facto standard, often make the most progress”.

One such example is Next Generation Telematics Protocol (NGTP). This is a collaboration of BMW, Connexis and WirelessCar, which has developed both a new telematics framework and a technology-neutral telematics protocol. See www.ngtp.org for further information.

The article mentions another initiative, the California-based GENIVI Alliance, which is also pursuing the broad adoption of an IVI reference platform.

■ GLOSSARY

BSI	British Standards Institution
C2C-CC	Car-2-Car Communication Consortium
CEN	Comité Européen de Normalisation: European Committee for Standardisation
CEN TC 278	CEN Technical Committee for Road Transport & Traffic Telematics
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.
D2 Project	EC-funded project consortium to update DATEX II from DATEX
DAB	Digital Audio Broadcasting, also known as Eureka 147: Standard which enables the high-quality transmission of text, data and sound at a high data rate. Primarily used for transmission of digital radio stations in Europe, Canada, China, India and Australia, but not USA.
DATEX	DATa EXchange: Series of standards for exchange of traffic and travel information
DATEX II	DATa EXchange version 2: The successor to DATEX for the exchange of traffic information and traffic data in Europe, which has evolved to reflect technological developments
DSRC	Dedicated Short Range Communication: Standard enabling data transmission at a frequency of 5.8 GHz. Radio system with focus on short range communication, which is intended for electronic toll collection systems.
DVB	Digital Video Broadcasting: European-based consortium standard for the broadcast transmission of digital terrestrial television.
ETSI	European Telecommunications Standards Institute
ETSI TC ITS	ETSI Technical Committee for Intelligent Transport Systems
FP7	Seventh Framework Programme: EC-funded R & D Programme, starting in 2007
GENIVI Alliance	California-based alliance, which is pursuing the broad adoption of an IVI reference platform
GeoNet	A European project to implement a reference specification of a geographic addressing and routing protocol with support for IPv6 to be used to deliver safety messages between cars but also between cars and the roadside infrastructure within a designated destination area

GPRS	General Packet Radio Service: Digital cellular telephony system, "packet-switched", designed for data communications. Standard for data transmission by packet, with a speed of 64 Kbits/s
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).
IPv6	Internet Protocol version 6
ISO	International Organisation for Standardisation
ISO TC 204	ISO Technical Committee for Intelligent Transport Systems
ITIS	IT IS Holdings plc: Provider of traffic information in the UK
IVI	In-Vehicle Infotainment
NGTP	Next Generation Telematics Protocol
SAE International	(formerly the Society of Automotive Engineers): American standardisation body for vehicles
Safespot	FP6 Project identifying how intelligent vehicles and intelligent roads can cooperate to produce a breakthrough for road safety
SDI	Spatial Data Infrastructure
TISA	Traveller Information Services Association
TMC	Traffic Message Channel: Digital channel used to provide silent, coded messages to in-vehicle applications in order to display route and traffic information in a user's native language
TPEG	Transport Protocol Experts Group
TTI	Traffic and Traveller Information
US DOT	US Department Of Transport
WAVE	Wireless Access in Vehicular Environments, based on IEEE 802.11p and the IEEE 1609 series of standards
Wi-Fi	Wireless Fidelity: Trademark of the Wi-Fi alliance that represents equipment certified for interoperability for different wireless devices
XML	eXtensible Mark-up Language: Method of representing data and information about the data in a standardised, reasonably human-readable form