



Identifying ITS Opportunities for the HA Standards Newsletter: September 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

None to report

■ HOT TOPICS

Initial release of DATEX II Version 2.0 data exchange specifications; CEN standardisation progressing

Source: www.datex2.eu/

The initial release of DATEX II Version 2.0, the “reference for all applications requiring access to dynamic traffic and travel related information in Europe”, was published in June 2009. This now forms the basis of the current submission to CEN for formal standardisation of the principal elements of DATEX II. Following feedback from the CEN process, a further release is to be published by “mid-2010”.

DATEX II is a set of specifications for dynamic traffic and travel related information in Europe. It has evolved from the original (now withdrawn) DATEX standards, published in 2000. DATEX was originally designed and developed as a traffic and travel data exchange mechanism by a European task force set up to standardise the interface between traffic control and traffic information centres. 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. The specification set can be downloaded from the website following free registration: www.datex2.eu.

The ‘Reference Set’ of documentation defines the DATEX II specifications and constitutes the official release of DATEX II. This includes:

- The data model and the modelling methodology used to build it
- The XML schema and the tool used to automatically generate it from the data model
- The exchange platform specific model.

In addition to the reference set of documents, there is a revised set of supporting documentation providing a clear definition and explanation of the use of the DATEX II modelling methodology:

- DATEX II Exchange Platform Independent Model (PIM)
- DATEX II v2.0 Software Developer's Guide
- DATEX II v2.0 User Guide
- DATEX II v2.0 Data Dictionary
- Example XML messages
- DATEX II Schema generation tool guide.

This Reference Set of documents forms the basis of the initial batch of CEN standards. DATEX II is intended to become a multi-part Technical

Specification (TS), maintained by CEN Technical Committee 278. There are currently enquiries to confirm the first three standardisation work items, dealing with the most mature and widely used parts of DATEX II - DATEX II data exchange specifications for traffic management and information:

- Part 1: Context and framework (the modelling methodology)
- Part 2: Location referencing (see www.itsradarinternational.info/ for further information on location referencing)
- Part 3: Situation publication (the most widely used DATEX publication for traffic information messages).

The CEN standardisation process involves commenting and voting rounds and so the model is subject to change, therefore the terminology of "Version 2.0 Release Candidate 1" has been adopted. Drafts are to be circulated for comment inside CEN TC 278 WG 8 in December 2009. The DATEX II specification will then be updated according to this second draft and will be published on the website as "DATEX II v2.0, Release Candidate 2".

Subject to modifications, this will then be published in mid 2010 and will, in technical terms, be exactly compatible with the frozen version used for preparing the Technical Specification. Users of this version can therefore be assured that their systems are compliant with the CEN TS requirements.

The first three Technical Specification documents are expected to be published before the end of 2010. More parts to the standard are to follow soon, including other data publications and measured data.

Further details on the latest developments in DATEX II, as well as the ITS Radar International DATEX II Fact Sheet (Jan 07), can be found at www.itsradarinternational.info/.

ITS Radar International will continue to monitor developments in DATEX II

New DATEX II newsletter service and re-launch of website

Source: www.datex2.eu/

The DATEX II website has recently been re-launched with a full range of new user support features. The new setup enables users to actively participate in the DATEX II maintenance process.

DATEX II is a set of European specifications for exchange of traffic data and traffic information. According to the official website, it is the "reference for all applications requiring access to dynamic traffic and travel related information in Europe".

Features of the new site include the following:

- Download of Version 2.0 of the DATEX II specification – The new website now offers the download of both technical and informative documents; this is the latest version, which has corrected all known bugs and issues reported since the launch of DATEX II.
- Newsletter service – It is possible to subscribe to a new newsletter service, giving the latest news and updates

- Discussion forums – There are forums dedicated to particular topics, including extensions and standardisation
- DATEX II model extensions – Users that have created model extensions themselves are now able to upload these to the website and contribute their work to the standardisation process
- Directory of DATEX II services – Operators of systems that provide content via DATEX II services can register and promote their systems via the website’s new directory

To make full use of the website, users are asked to register. Registration is free of charge and open to all. The DATEX II Helpdesk, helpdesk@datex2.eu, is available to answer questions or problems.

Further details on the latest developments in the standardisation status of DATEX II can also be found at www.itsradarinternational.info/.

HA recommended to view new website and register at www.datex2.eu/

Dynamic Location Referencing ‘AGORA-C’ licenses now available to the public upon request

Source: www.tisa.org/; www.vialicensing.com/

Via Licensing, the patent agent for the ‘AGORA-C’ location referencing technique, has announced the availability of a joint licensing programme or ‘patent pool’ for patents essential to the AGORA-C Standard.

Location referencing is the task of ensuring compatible referencing of locations when information is exchanged between different applications or systems with different geographic databases. The ISO 17572 series of standards, which was published in December 2008, defines two methods for location referencing.

The second method (ISO 17572-3), “Dynamic Location References” (DLR), works by encoding locations on the road network, such as intersections and road sections. It anticipates differences between map versions at the time of decoding and snaps to the corresponding map location when placed on a target map. DLR has evolved from the European ‘AGORA-C’ proposal and supports location referencing without needing pre-encoded locations or needing the source and destination of a message to use the same reference map. The technology enables efficient routing based upon updated traffic information and supports the development of proactive traffic management services aimed at reducing roadway congestion.

A [press release](#) from Via Licensing states that:

“The AGORA-C patent pool is Via Licensing’s first joint licensing program designed for the automotive market and includes patents from key contributors to the standard... We hope to foster the rapid adoption of AGORA-C even beyond the automotive market by providing fair and convenient access to the intellectual property essential to this standard.”

Further information can be found at www.tisa.org/ and www.itsradarinternational.info/.

ITS Radar International will continue to monitor developments in location referencing

New INSPIRE website

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

The INSPIRE website, inspire.jrc.ec.europa.eu/, has been re-launched with simplified navigation and improved search functions. INSPIRE, which stands for INfrastructure for SPatial InfoRmation in the European community, is an EC Directive concerning the sharing and harmonisation of spatial datasets across Europe.

The website contains: background information; technical documents on the 'Implementing Rules'; stakeholder information; news and events.

Further information on INSPIRE can be found at www.itsradarinternational.info/.

ITS Radar International will continue to monitor developments in INSPIRE

■ CALLS FOR PROPOSALS

EC's FP7 Call for Research Proposals – Call for Cooperative Systems Standardisation Support

Source: [CORDIS – FP7](#)

The [ITS Radar International September 2009 Research Newsletter](#) contains details of a new EC call for research proposals. The call includes projects supporting standards development. Under Objective ICT-2009.6.1: ICT for Safety and Energy Efficiency in Mobility there is a call for Coordination and Support Actions:

“A common research agenda for energy efficiency by enhancing international cooperation; increased user awareness and dissemination of research results by supporting the Intelligent Car Initiative and the eSafety Forum, by **supporting standardisation** and by preparing a common showcase for cooperative systems.”

The submission deadline is 26 October 2009.

ITS Radar International will monitor developments

Call for Support to Galileo Standardisation – now closed

Source: cordis.europa.eu/

The European Commission recently issued a call for “Support to Galileo Standardisation”. The brief states that:

“The aim of this contract is to carry on the standardisation process for EGNOS and Galileo in key application areas. It is expected to cover specific aspects... supporting the appropriate standardisation bodies and presenting relevant technical contributions to GNSS performance standards and standardisation of specific aspects in the operating chain for the target communities.”

The budget is € 1,000,000.

ITS Radar International will monitor developments

Call for experts on electronic fee collection – now closed

Source: www3.nen.nl/cen278/

CEN/TC 278 has recently been recruiting paid experts for two project teams in the field of electronic fee collection (EFC).

- Project Team 28 is to develop a test suite for autonomous EFC systems
- Project Team 31 is to prepare a report on value added services for on-board equipment

ITS Radar International will monitor developments

■ PROJECTS

None to report

■ RECENT PUBLICATIONS

ITS Radar International Standards Tracking Spreadsheet updated

Source: www.iso.org/, NEN

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

Standards published or adopted since June 2009:

ISO TC 204, WG 1 - ISO/TR 12859:2009, Published

Intelligent transport systems -- System architecture -- Privacy aspects in ITS standards and systems

ISO TC 204, WG 1 - ISO 24097-1:2009, Published

Intelligent transport systems -- Using web services (machine-machine delivery) for ITS service delivery -- Part 1: Realization of interoperable web services

ISO TC 204, WG 3 - ISO 17572-3:2008/Cor 1:2009, Published Corollary

Intelligent transport systems (ITS) -- Location referencing for geographic databases -- Part 3: Dynamic location references (dynamic profile) -- Corollary 1:2009

ISO TC 204, WG 5 - ISO/TS 12813, Adopted

CEN TC 278, WG 1 - prCEN ISO/TS 12813, Work Item 278253, Adopted

Electronic fee collection -- Compliance check communication for autonomous systems

ISO TC 204, WG 14 - ISO 22179:2009, Published

Intelligent transport systems -- Full speed range adaptive cruise control (FSRA) systems -- Performance requirements and test procedures

ISO TC 204, WG 16 - ISO 24103:2009, Published

Intelligent transport systems -- Communications access for land mobiles (CALM) -- Media adapted interface layer (MAIL)

CEN TC 278, WG 15 - EN ISO 24978, Work Item 278206, Adopted

Intelligent transport systems - ITS Safety and emergency messages using any available wireless media - Data registry procedures (ISO/FDIS 24978:2009)

ETSI TC ITS WG 1 - TR 102 638 Ver. 1.1.1, ITS-0010001, Published

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Definitions

ETSI TC ITS WG 1 - TR 102 698 Ver. 1.1.1, ITS-0010003, Published

Intelligent Transport Systems (ITS); Vehicular Communications; C2C-CC Demonstrator 2008; Use Cases and Technical Specifications

ETSI TC ITS WG 2 - TR 102 707 Ver. 1.1.1, ITS-0020013, Published

Intelligent Transport Systems (ITS); ETSI object identifier tree; ITS domain

ETSI TC ITS WG 4 - TS 102 486-1-3 Ver. 1.2.2, ITS-0040017, Published

Intelligent Transport Systems (ITS); Road Transport and Traffic Telematics (RTTT); Test specifications for Dedicated Short Range Communication (DSRC) transmission equipment; Part 1: DSRC data link layer: medium access and logical link control; Sub-Part 3: Abstract Test Suite (ATS) and partial PIXIT proforma

New Projects since June 2009:

ISO TC 204, WG 5 - ISO/NP 12855, New Project

Electronic fee collection - Information exchange between service provision and toll charging

CEN TC 278, WG 1 - Work Item 278254, New Project

Electronic fee collection - Conformity evaluation of on-board and roadside equipment to CEN ISO/TS 12813 – Part 2: Abstract test suite

CEN TC 278, WG 1 - prCEN ISO TS 13140-2, Work Item 278255, New Project

Electronic fee collection - Conformity evaluation of on-board and roadside equipment to CEN ISO/TS 13141 - Part 2: Abstract test suite

ETSI TC ITS WG 2, TS 102 723-Parts 1 to 6, Ver. 1.1.1, ITS-0020015 to ITS-0020020, New Project

Intelligent Transport Systems; OSI cross-layer topics; Part 1: Architecture and addressing schemes; Part 2: Management information base; Part 3: Interface between management entity and access layer; Part 4: Interface

between management entity and network and transport layers; Part 5: Interface between management entity and facilities layer; Part 6: Interface between management entity and security entity

ETSI TC ITS WG 2, TS 102 760-3, Ver. 1.1.1, ITS-0020021, New Project
ITS (Intelligent Transport Services); Test specifications for Intelligent Transport Systems, Communications Access for Land Mobiles (CALM), Medium Service Access Points (IS 21218); Part 3: Abstract Test Suite (ATS)

ETSI TC ITS WG 2, TS 102 798, Ver. 1.1.1, ITS-0020022, New Project
Intelligent Transport Systems; Testing; Framework

ETSI TC ITS WG 3, TS 102 723-11, Ver. 1.1.1, ITS-0030008, New Project
Intelligent Transport Systems; OSI cross-layer topics; Part 11: Interface between network and transport layers and facilities layer

ETSI TC ITS WG 4, TS 102 723-10, Ver. 1.1.1, ITS-0040018, New Project
Intelligent Transport Systems; OSI cross-layer topics; Part 10: Interface between access layer and network and transport layers

ETSI TC ITS WG 5, TS 102 723-Parts 7 to 9, Ver. 1.1.1, ITS-0050007, New Project
Intelligent Transport Systems; OSI cross-layer topics; Part 7: Interface between security entity and access layer; Part 8: Interface between security entity and network and transport layers; Part 9: Interface between security entity and facilities layer

Published standards, review complete since June 2009:

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

ISO TC 204, WG 5 - ISO/TS 17574, Review Adopted

CEN TC 278, WG 1 - CEN ISO/TS 17574, Work Item 278235, Adopted
Electronic fee collection - Guidelines for security protection profiles

Published standards now under review since June 2009:

ISO TC 204, WG 3 - ISO/CD 14825, Under Review

CEN TC 278, WG 7 - prEN ISO 14825, Work Item 278256, Under Review
Intelligent transport systems - Geographic Data Files (GDF) - Overall data specification (Review of EN ISO 14825:2004)

ISO TC 204, WG 4 - ISO/CD 24534-5, Under Review

Automatic vehicle and equipment identification -- Electronic Registration Identification (ERI) for vehicles -- Part 5: Secure communications using symmetrical techniques

ITS Radar International will continue to update the tracker quarterly

Article: Progress of co-operative safety communication standards IEEE 802.11p and CALM

Source: Vision Zero International, Issue 2 (June 2009) p.66-69

The 2nd Issue of Traffic Technology International's safety publication, "Vision Zero", has an article on the various standards under development to enable vehicle-to-vehicle and vehicle-to-infrastructure communication. This includes the latest developments in IEEE 802.11p and CALM (Communications Architecture for Land Mobiles).

For further information on IEEE 802.11p, see the feature in the ITS Radar International [July 2009 Standards Newsletter](#).

Article: New 'MPEG' H.264 video compression standard to improve video quality for traffic management centres

Source: Traffic Technology International (June/July 2009) p.58-59

The June/July 2009 Issue of Traffic Technology contains an article on the latest generation of 'MPEG' standards for real-time video compression and streaming. The H.264 standard, also known as "MPEG-4 part 10", was developed by ISO and IEC and is already widely adopted.

The article discusses the key features of the standard and what distinguishes it from previous versions.

Two models recently updated on the HA's ITS Registry

The ITS Registry website states that:

- The Technology Performance Management System (TPMS) model has been added at draft level
- The DATEX II model has been updated to Version 2.0 RC1.

The Highways Agency ITS Registry is a repository of data definitions and data models, with an associated supporting process for improving quality and for harmonisation across different systems. The registry aims to cut across work in isolated 'silos' and avoid re-invention and duplication of effort.

For further information visit www.itsregistry.org.uk and the [ITS Radar International ITS Registry Factsheet \(February 07\)](#).

ITS Radar International will continue to monitor developments on the ITS Registry

■ GLOSSARY

AGORA-C (implemEntAtion of Global lOcation Referencing Approach):
Dynamic method for location referencing, which forms the basis of ISO 17572, Part 3

BSI	British Standards Institution
CALM	(Communications Architecture for Land Mobiles, also known as Communications Access for Land Mobiles, previously known as Continuous Access, Long and Medium Range): Standards for high speed continuous communication link for cooperative ITS, independent of the type of communication media
CEN	(Comité Européen de Normalisation): European Standardisation Committee
CORDIS	(COmmunity Research and Development Information Service): Web based service providing information on EU-supported Research and Development activities
D2 Project	EC-funded project consortium to update DATEX II from DATEX
DATEX	(DATa EXchange): 1st generation of series of European technical specifications (published as CEN TS in 2000, now withdrawn) for exchange of traffic and travel information
DATEX II	(DATa EXchange 2): The successor to DATEX for the exchange of traffic information and traffic data in Europe, which has evolved to reflect technological developments; the reference for all applications requiring access to dynamic traffic and travel related information in Europe
DLR	Dynamic Location References
EC	European Commission
EFC	(Electronic Fee Collection): A system that enables automatic debiting/payment for a transport service without any action from the user at the moment of use - example: automatic toll collection
EGNOS	(European Geostationary Navigation Overlay Service): A positioning system designed to augment satellite navigation systems and which will ultimately form part of the Galileo satellite navigation system; typically used for air applications
eSafety Forum	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
FP7	(Seventh Framework Programme): EC-funded R & D Programme, starting in 2007
Galileo	The European contribution to the Global Navigation Satellite System; full operational capability originally planned for 2008
GNSS	(Global Navigation Satellite System): The generic term for all satellite navigation and positioning systems operating around the world
H.264	(MPEG-4 part 10) The latest generation of 'MPEG' (Moving Picture Experts Group) standards for real-time video compression and streaming

ICT	Information and Communications Technologies
IEEE 802.11p	(IEEE 802.11 Task Group p): Standard to define enhancements to wireless LAN standard, 802.11, required to support Intelligent Transportation Systems (ITS) applications
INSPIRE	(INfrastructure for SPatial InfoRmation in the European community): EC Directive concerning the sharing and harmonisation of spatial datasets across Europe
ISO	International Organisation for Standardisation
LR	(Location Referencing): The task of ensuring compatible referencing of locations when information is exchanged between different applications or systems with different geographic databases
PIM	Platform Independent Model
RC1	Release Candidate 1
TISA	The Traveller Information Services Association
TPMS	Technology Performance Management System
TS	Technical Specification
WG	Working Group
XML	(eXtensible Mark-up Language): Method of representing data and information about the data in a standardised, reasonably human-readable, form