Standardisation Mandate M/453 Co-operative Systems CEN TC278/WG16 ISO TC204/WG18

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ISO TC204/WG18

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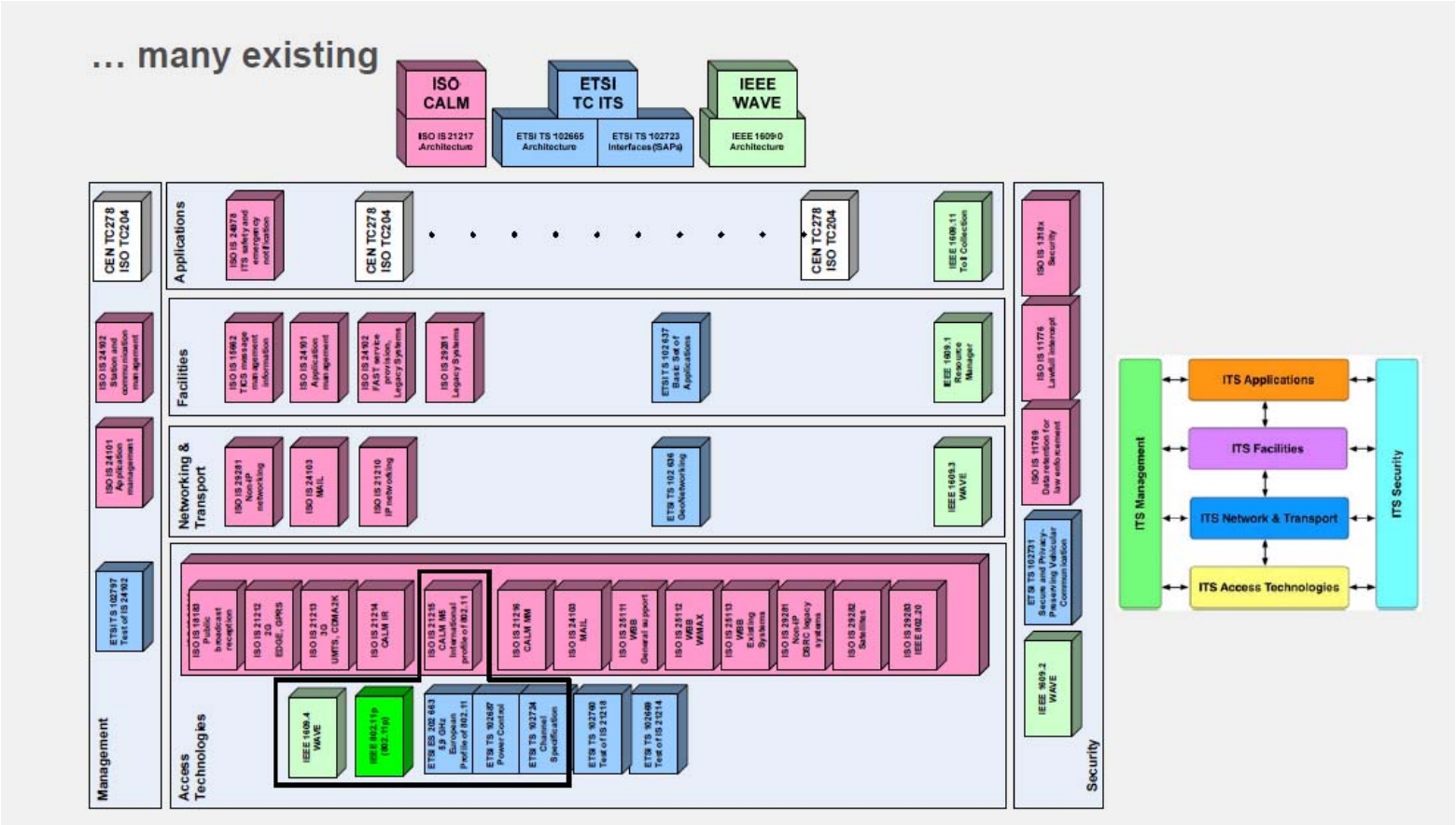
Many CEN/TC278 and ISO/TC204 WG's are involved in Cooperative Systems Standardisation

Involved CEN/TC278 WG's beside WG16	Involved ISO/TC204 WG's beside WG18
– WG13 (Architecture)	– WG1 (Architecture)
– WG8 (Road Traffic Data)	– WG3 (Database Technology)
– WG12 (Automatic Vehicle & Equipment Identification)	– WG4 (Automatic Vehicle & Equipment Identification)
– WG1 (Electronic Fee Collection)	– WG5 (Fee and Toll Collection)
	– WG7 (General Fleet Management and Commercial/Freight Operations)
– WG3 (Public Transport)	– WG8 (Public Transport)
	– WG9 (Integrated Transport Inform., Management and Control)
– WG4 (Traffic and Traveller Inform.)	– WG10 (Traveller Inform. Systems)
	– WG14 (Vehicle/Roadway Warning and Control Systems)
	– WG16 (CALM)
	– WG17 (Nomadic Devices)
– WG14 (After Theft Systems for the Recovery of Stolen Vehicles)	
– WG15 (eSafety, eCall)	

M/453 and the EU Action Plan requires strong co-ordination across a wide range of standards



The WG16/WG18 Focus cover two main targets for Cooperative Systems Standardisation in CEN and ISO

1. Harmonization, Coordination, Cooperation, and Information on ongoing and future Cooperative Systems Standardisation Activities
2. Development of specific Standards, e.g.
   - CS framework architecture and description of roles and responsibilities in the context of cooperative ITS
   - PWI 00278266 ITS

     Classification and management of ITS applications in a global context
   - PWI 00278267 ITS

     Co-operative system application messages, protocols and profiles
   - PWI 00278268 ITS

     ITS application requirements for automatic selection of communication interfaces
   - PWI 00278269 ITS

     Definition of LDM concept

Meetings Update

1. **Joint 278/WG16-204/WG18 Meetings**
   - April 19-20, 2010 – New Orleans, Louisiana, USA
   - Sept 21-22, 2010 – Zurich, Switzerland
   - Nov 1-2, 2010 – Jeju Island, Korea
   - March 22-23, 2011 – Vienna, Austria
   - April 11-12, 2011 – Prague, Czech Republic

Meetings Update

2. Joint Meetings with other ISO TC/204 WG's

- Joint meeting with ISO/TC204 WG16 (CALM) – Dec 9, 2009, Hohenstein-Ödenwaldstetten, Germany
- Joint meeting with ISO/TC204 WG14 (Vehicle/Roadway Warning and Control Systems) → Applications – April 21, 2010, New Orleans, Louisiana, USA
- Joint meeting with ISO/TC204 WG3 (ITS Database Technology) → LDM – April 21, 2010, New Orleans, Louisiana, USA
- ***Joint meeting with WG9 (Integrated Transport Information, Management and Control) → Infrastructure based applications – Nov 3, 2010, Jeju Island, Korea***

Meetings Update

3. **Joint Meetings with ETSI TC ITS**
   - May 25-27, 2010 – Berlin, Germany Information exchange on ongoing activities in ETSI TC ITS and CEN/ISO (Facilities, Architecture, Data Privacy, Security, CALM, LDM, Applications)
   - ***Feb 9-11, 2011 – Torino, Italy***

CEN and ISO will strongly support the Harmonization Activities of WG16/WG18

EU-U.S. Joint Declaration of Intent on Research Cooperation in Cooperative Systems

Washington, D.C., Nov 13, 2009

Section 10: "Globally harmonised standards are essentials"

- **Resolution 766 ISO/TC204 New Orleans Plenary, Spring 2010:**

  ISO TC204 resolves to endorse Section 10 of EU-U.S. Joint Declaration of Intent on Research Cooperation in Cooperative Systems
- **Resolution 767 ISO/TC204 New Orleans Plenary, Spring 2010:**

  ISO TC204 instructs its WG18 to assume as its main role the leadership of the global coordination/harmonization of Cooperative Systems standardisation in accordance with the previous resolution
- **Resolution 768 ISO/TC204 New Orleans Plenary, Spring 2010:**

  ISO TC204 instructs its Secretariat to approach CEN/IEEE/ETSI/SAE requesting access to working documents concerning their Work Items for Cooperative Systems by ISO TC204 technical experts
- **Resolution 769 ISO/TC204 New Orleans Plenary, Spring 2010:**

  ISO TC204 instructs its Secretariat to approach CEN/IEEE/ETSI/SAE requesting joint participation in all development processes of Cooperative Systems Work Items

Minimum Set of Standards, CEN/ISO Responsibility

General

Proposed Standard	Description	ISO/ TC204	CEN/ TC278
Definition and Harmonized Terminology	Common agreement on definitions and terminologies to be used for standardization. Harmonization and cross-check of terminologies among SDOs.	WG1	WG13
European co-operative ITS framework architecture	Analysis and description of roles and responsibilities in the context of cooperative ITS.		**WG16**
Common Data Dictionary	Common definition and description of data elements, data frames to be used inside station and in transmitted messages. This common data dictionary will allow different in-vehiclesystem and road infrastructure system to have a common base of data. (payload).	WG8	WG3
European reference ITS communication architecture	Standardized communication architecture for ITS cooperative systems, the defined architecture accommodates multiple applications and communication means. The architecture is based on OSI model. **ETSI TC ITS**	WG16	

High Priority

Medium Priority

Low Priority

Minimum Set of Standards, CEN/ISO Responsibility

Application / Application group

Proposed Standard	Description	ISO/ TC204	CEN/ TC278
Floating Car Data Collection **V2I, I2I**	Collection of Information from vehicles for traffic information and management	**WG18**	**WG16**
Event Driven Road Hazard Warning **V2I, I2I**	Based on a certain event a warning message is sent out: Roadwork Warning, Wrong Way Driving Warning, Collision Risk Warning from an ITS-S Roadside, Traffic Condition Safety Warning, Weather condition warning	WG14	
Traffic Management **V2I, I2I**	Optimum traffic throughput via speed limits, centrally determined routing, road network management, no overtaking for trucks Monitoring and routing of dangerous goods	WG9 WG10	**WG16**
Cooperative Traveller Assistance **V2I, I2I**	Navigation considering information received about restricted access, etc., Parking information/booking, POI	tbd.	tbd.
Value Added Services **V2I, I2I**	Insurance & Financial Serives	tbd.	tbd.
Cooperative Awareness Driving Assistance (safety) **V2V**	Information from other vehicles as basis for the generation of in-vehicle Warnings: Emergency Vehicle Warning, Intersection Collision Warning, Slow Vehicle Warning, Motorcycle Approaching Indication ETSI TC ITS	WG14	

High Priority

Medium Priority

Low Priority

EU-U.S. Task Force: Selected Applications

Application / Application Group

The EU-US Task Force, based on the EU-US joint declaration of Intent on research cooperation in CS, has selected two cooperative safety applications in the V2V area for first deployment.

It is also the intent to define a cooperative sustainability (environmental) application (mainly based on V2I) for first deployment.

The EU-US Task Force will also define the system and the concept of operation for these applications.

EU-U.S. Task Force: Selected Applications

Forward Collision Avoidance (FCA)

Forward Collision Avoidance (FCA) systems are intended to assist the driver in avoiding or mitigating the impact of rear-end collisions (i.e., a vehicle striking the rear portion of a vehicle traveling in the same direction directly in front of it). FCA uses Dedicated Short Range Communications (DSRC) and a positioning system to identify stopped or slower moving vehicles in the host vehicle's path. The system uses this information to issue a warning to the driver of the host vehicle or automatically decelerate the vehicle if the driver does not respond in time or with sufficient braking authority.

EU-U.S. Task Force: Selected Applications

Red Light (and Stop Sign) Violation Warning (RLV)

The Red Light (and Stop Sign) Violation (RLV) Warning application is a cooperative stop sign and traffic signal violation warning system for vehicles. The system is intended to help drivers avoid intersection crashes attributable to stop sign and traffic signal violations. To accomplish this, the system must warn drivers when the vehicle they are driving is about to enter an intersection after violating a stop sign, traffic signal, or red light. An intersection violation warning system should be designed so that false alarms and unintended consequences are minimized.

Minimum Set of Standards, CEN/ISO Responsibility

Facilities

Proposed Standard	Description	ISO/ TC204	CEN/ TC278
Local Dynamic Map (LDM)	Local dynamic map providing a data base of time and location referenced elements.	WG3	**WG16**

LDM Standardisation activities in CEN, ISO and ETSI

278/WG16 PWI

- **Definition of LDM concept**

204/WG3 Database Technology

- **Interface definition between LDM and in-vehicle database**
- **Location referencing methodology**
- **New entities defined in LDM regarding the highly detailed intersection diagram**

ETSI TC ITS STF404 (LDM)

- **Proposal for new standardisation work items as judged necessary to enable the LDM integration with other ITS station elements and guarantee the interoperability of applications using the LDM.**
- **Proposal for an agreement between ETSI and CEN about their respective responsibility in the development of the identified new work items.**

High Priority

Medium Priority

Low Priority

WG18 is going to support the LDM related activities in WG3 as part of the overall CS standardisation and will inform about LDM related activities in CEN and ETSI.

Minimum Set of Standards, CEN/ISO Responsibility

Facilities (cont.)

Proposed Standard	Description	ISO/ TC204	CEN/ TC278
Road geometry messages and regulation information provision	This facility provides functionalities to construct, sequence and transmit a message in a common format, providing road and intersection geometry, path and regulation information from road side station to oncoming vehicles.	WG3	WG8
Traffic signal phase and timing	This facility provides functionalities to construct, sequence and transmitting a message in a common format, providing traffic signal phase and timing from road side station to oncoming vehicles	WG9	
GNSS correction data	This facility provides functionalities to construct, sequence and transmit a message in a common format, providing GNSS correction data or positioning augmentation data from road side station to oncoming vehicles.	tbd.	tbd.
Localised traffic information	This facility provides functionalities to construct, sequence and transmit a message in a common format, providing localised traffic information from road side station to oncoming vehicles.	WG10	WG4
Location referencing	This facility provides location referencing functionalities and encoding specifications for geographic position used in V2X messages.	tbd.	tbd.

High Priority

Medium Priority

Low Priority

Thank You!

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