



## C2X in CEN and ETSI

Teresina Herb BASt

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## **Standardization of Cooperative Systems**



# Action Plan for the Deployment of Intelligent Transport Systems in Europe (12/2008)

- Accelerate and coordinate the deployment of Intelligent Transport Systems (ITS) in road transport
  - → Greening transport
  - → Improving transport efficiency
  - → Improving road safety and security
- Definition of six priority areas
- → Request for a mandate for the European Standardization Organizations to develop standards for ITS implementations regarding Co-operative systems
  - → Standardization Mandate M/453 EN (10/2009)



#### **Standardization Mandate M/453 EN**



- → Addressed to ETSI, CEN, CENELEC
- → Jointly prepare set of standards, specifications and guidelines to support European Community wide implementation and deployment of Co-operative ITS systems

#### The Commission requested to

- Deliver a detailed **work program** covering the necessary standardization work
- Identify potential functionalities
- Identify and develop the **Minimum Set of European Standards**
- Develop test methods for assessing the conformity
- Develop the rest of the identified standards and technical specifications
- → Consider also findings from projects (e.g. CVIS, SAFESPOT, COOPERS)
- → Incorporate interested stakeholders

#### **Activities**



- Several Joint Taskforce meetings between CEN and ETSI
- Acceptance of mandate by CEN and ETSI
- Preparation of response to the European Commission
- Agreement on definition of cooperative systems
  - → Scope of mandate
- Identification of required technical standards
  - Basic Set of Applications
  - ETSI Communication Reference Architecture
- Overall architecture
  - Purpose, scope, policies
  - Roles & Responsibilities
- Split of Work and Mode of Cooperation





#### **Overall Architecture**



#### Why do we need an overall architecture

- Technical standards describing different layers and functionalities of the system:
  - Communication architecture, components, protocols, data flows, access technologies, ...
- → Different stakeholders with different views of the system on different abstraction levels
  - → Risk:
    - single parts do not fit together
    - aspects are missing, e.g. roles and responsibilities, information flow
- → Example: standardization of EFC

### Open distributed processing



## **Proposed Work Item**

The objective of ODP standardization is the development of standards that allow the benefits of distributing information processing services to be realized in an environment of heterogeneous IT resources and multiple organizational domains<sup>1</sup>.

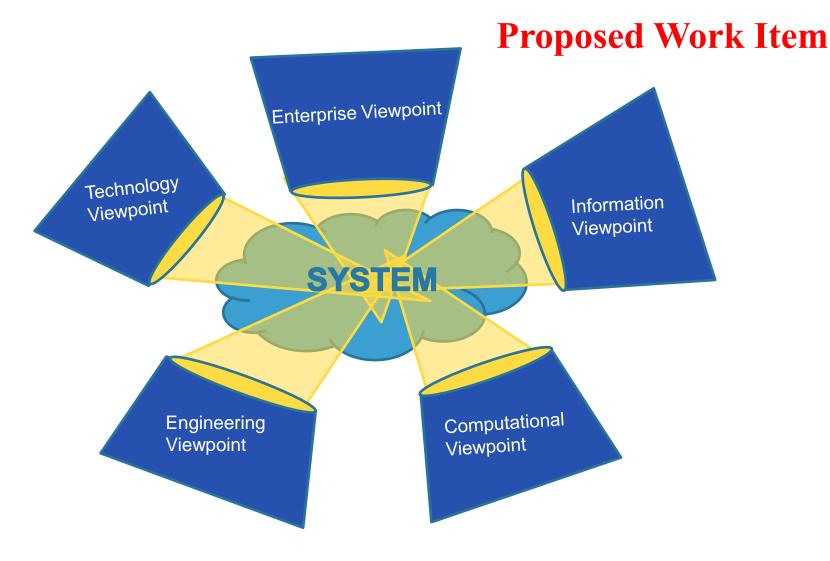
→ Basis for definition of architecture standards and component and infrastructure functions to facilitate design and analysis of a distributed system.

<sup>1</sup>ISO/IEC 10746 – Information Technology – Open Distributed Processing



## **Open Distributed Processing**





according to Open Distributed Processing (ODP – ISO standard 10746')

#### Conclusion



## **Proposed Work Item**

- Examination of the system from different perspectives
- Consideration of all relevant aspects
- Ensure mapping and correspondence between different layers
- → Integration of all viewpoints into an overall architecture



## Thank you for your attention.

Teresina Herb BASt – Federal Highway Research Institute Brüderstr. 53 D-51427 Bergisch Gladbach herb@bast.de

