

PRE-DRIVE C2X

PREparation for DRIVING implementation and Evaluation
of C-2-X communication technology



Based on the overall description of a common European architecture for a vehicle to x communication system defined by COMeSafety, PRE-DRIVE C2X develops a detailed system specification and a functionally verified prototype robust enough to be used in future field operational tests. Furthermore, an integrated simulation model for cooperative systems will be developed. It will allow for a holistic approach for estimating the benefits in terms of safety, efficiency and the environment. Finally, all tools and methods necessary for functional verification and testing of cooperative systems in laboratory environment and, in the framework of a field operational test, under real traffic conditions will be realised. All methods and tools developed in the project will be applied to the PRE-DRIVE C2X prototype system in order to verify its proper functioning and to make a limited impact assessment including a user acceptance test.

At a Glance

Project goals:

Development and prototypical realisation of a common European system for vehicular communication based on EU-project COMeSafety's system description; preparation of a field trial of vehicular communication technology; development of a holistic simulation model and of tools and methods necessary for the evaluation of vehicular communication technology under laboratory conditions and in a real traffic environment

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Partners from:

Automotive OEMs:

Audi, BMW R&T, CRF, Opel, Volkswagen, VTEC

Electronics & Supplier Industry:

Delphi, Hitachi Europe, NEC Europe, Renesas Europe

Partners (continued):

Software developers:

SAP AG

Traffic engineers:

PTV Planung Transport Verkehr AG

Universities, Research Institutes:

DLR, EICT, Fraunhofer FOKUS, INRETS, IMEC, IMC, PBS, TNO, TU Graz, Universität Karlsruhe, University of Surrey

Duration:

01.07.2009 – 30.06.2008

Total cost:

8.426 M€

Programme:

FP7 ICT Call 2 'ICT for Cooperative Systems'

Project Objectives

The project's objectives are to

- establish a **pan European architecture framework for cooperative systems** ensuring interoperability of all different applications of vehicle-to-vehicle and vehicle-to-infrastructure communications for safety and mobility

- perform **consistent a priori estimations** of the impact on traffic safety and mobility of cooperative systems for road safety and traffic efficiency
- **pave the road for the forthcoming field operational tests** on cooperative systems and to
- identify the **key enabling and disabling factors** to plan the future market introduction of vehicular communication systems.



Vehicle-to-infrastructure communication

- **Commonly agreed use cases** for vehicular communication system
- Verified **methods and tools for field operational test** with vehicular communication
- **A Demonstration, functional verification and impact assessment** of the PRE-DRIVE C2X/COMeSafety architecture
- Contributions to relevant **standardisation** activities
- A contribution to the **public awareness** of benefits of vehicular communication technology



Vehicle-to-vehicle communication

Major Achievements

The following achievements shall be made:

- **A System architecture** for European cooperative driving systems developed by COMeSafety on the basis of the architecture drafted by COMeSafety
- **An Integrated simulation tool set** allowing to assess all aspects of vehicular communication
 - Technical aspects
 - Traffic and safety impact
 - Environmental effects
- **A Robust prototype** with hardware and software components suitable for use in field operational tests

Stakeholder Workshops

PRE-DRIVE C2X will conduct three stakeholder workshops in order to develop a commonly agreed deployment and implementation strategy. All stakeholders in cooperative systems, such as automotive OEMs, technology suppliers, road operators, service providers and public authorities, will be invited. In exchange for participation in these workshops, stakeholders get early access to project information. They will also be able to establish close contacts to the key players in the field of cooperative system technology. This will take them to an optimal starting position when system deployment begins.

For further information:

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