

PROJECT

PRE-DRIVE

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

Funding: European (7th RTD Framework Programme)

Duration: Jul 2008 - Sep 2010

Status: Complete with results

Total project cost: €8,552,176

EU contribution: €5,014,999



Call for proposal: FP7-ICT-2007-2

[CORDIS RCN : 87604](#)

Background & policy context:

The negative externalities of increasing urban mobility such as increasing congestion, environmental and safety impacts are core issues among the EU research themes. The PRE-DRIVE C2X project, developing an integrated simulation model for cooperative systems, will enable a holistic approach for estimation of the expected benefits in terms of safety, efficiency and environment.

Objectives:

The project set out to create the link between the technological building blocks and market deployment of future mobility systems for people and goods that will be safe, efficient and clean.

Methodology:

Based on the overall description of a common European architecture for an inter-vehicle and vehicle-to-infrastructure communication system PRE-DRIVE C2X developed a detailed system specification and a working as well as functionally verified prototype. It is robust enough to be used in future field operational trials of cooperative systems. Furthermore PRE-DRIVE C2X developed an integrated simulation model for cooperative systems, which, for the first time, enabled a holistic approach for estimation of the expected benefits in terms of safety, efficiency and environment.

This work was topped of by the development of tools and methods necessary for functional verification and testing of cooperative systems in laboratory environment, on test tracks and on real roads in the framework of a field operational test. These were applied to the PRE-DRIVE C2X prototype system to verify its proper functioning and to perform a limited impact assessment including a user-friendliness test. Last but not least extensive dissemination activities were carried out in order to communicate the benefits of cooperative systems vehicle technology to the public and to address all relevant European stakeholders.

Parent Programmes:

[FP7-ICT - Information and Communication Technologies](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Daimler Ag

Address:

Mercedesstrasse
70327 Stuttgart

Germany

Organisation Website:

<http://www.daimler.com>

EU Contribution: €564,993

Partner Organisations:

Bmw Forschung Und Technik Gmbh

Address:

HANAUER STRASSE 46
80992 MUENCHEN
Germany

EU Contribution: €214,364

European Center For Information And Communication Technologies Gmbh

Address:

TORGAUER STRASSE 12-15 EUREF CAMPUS HOUSE 13
10829 BERLIN
Germany

EU Contribution: €258,735

Volvo Bus Corporation

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Fästningsvägen 1
40508 Gothenburg
Sweden

Organisation Website:

http://www.volvo.com/bus/global/en-gb/home_new.htm

EU Contribution: €187,868

Technische Universitaet Graz

Address:

Rechbauerstrasse
8010 Graz
Austria

Organisation Website:

<http://www.tugraz.at>

EU Contribution: €62,836

Centro Ricerche Fiat - Societa Consortile Per Azioni

Address:

Strada Torino, 50
10043 ORBASSANO (TO)
Italy

Organisation Website:

<http://www.crf.it>

EU Contribution: €276,834

Nederlandse Organisatie Voor Toegepast Natuurwetenschappelijk Onderzoek Tno

Address:

ANNA VAN BUERENPLEIN 1
2595 DA DEN HAAG
Netherlands

Organisation Website:

<http://www.tno.nl>

EU Contribution: €189,845

Renesas Technology Europe GmbH

Address:

GOTHAER STRASSE 18
40880 RATINGEN
Germany

EU Contribution: €54,060

Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.v.

Address:

Hansastrasse 27C
80686 MUNCHEN
Germany

Organisation Website:

<http://www.fhg.de>

EU Contribution: €383,227

Interuniversitair Micro-Electronica Centrum

Address:

Gaston Crommenlaan 8/102
9050 Gent
Belgium

Organisation Website:

<http://www.imec.be>

EU Contribution: €271,184

Pbs Projektgruppe Fuer Betriebswirtschaftliche Studien Ag

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Infanteriestrasse 19 Haus 4 A
80797 Muenchen
Germany

EU Contribution: €0

Sap Se

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DIETMAR HOPP ALLEE 16
69190 WALLDORF
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Organisation Website:

<http://www.sap.com>

EU Contribution: €333,949

Ptv Planung Transport Verkehr Ag

Address:

Stumpfstrasse 1
76131 KARLSRUHE
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Organisation Website:

<http://www.ptv.de>

EU Contribution: €148,894

Irion Management Consulting Gmbh

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78462 Konstanz
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EU Contribution: €51,633

Delphi Delco Electronics Europe Gmbh

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VORM EICHHOLZ 1
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Germany

EU Contribution: €295,370

Deutsches Zentrum Fr Luft Und Raumfahrt E.v

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Organisation Website:

<http://www.dlr.de>

EU Contribution: €246,638

Audi Aktiengesellschaft

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EU Contribution: €43,108

Facit Research Gmbh & Co. Kg

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Neuhauser Str.
80331 Munchen
Germany

Organisation Website:

<http://www.facit-mafo.de>

EU Contribution: €212,116

Universitaet Karlsruhe

Address:

Kaiserstrasse 12
76131 KARLSRUHE
Germany

Organisation Website:

<http://www.uni-karlsruhe.de>

EU Contribution: €0

Karlsruher Institut Fuer Technologie

Address:

Kaiserstrasse
76131 Karlsruhe
Germany

Organisation Website:

<http://www.kit.edu>

EU Contribution: €124,086

Hitachi Air Conditioning Europe Sas

Address:

Rue Grange Dame Rose
78140 Velizy Villacoublay
France

Organisation Website:

<http://www.hitachi.eu>

EU Contribution: €287,108

Nec Europe Ltd

Address:

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Organisation Website:

<http://www.neceurope.com>

EU Contribution: €113,555

Institut National De La Recherche Sur Les Transports Et Leur Securite

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Organisation Website:

<http://www.inrets.fr>

EU Contribution: €0

Volkswagen

Address:

Berliner Ring 2
1894 WOLFSBURG
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Organisation Website:

<http://www.volkswagen.de>

EU Contribution: €153,957

University Of Surrey

Address:

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United Kingdom

EU Contribution: €305,382

Adam Opel Ag

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Germany

Organisation Website:

<http://www.opel.com>

EU Contribution: €187,533

Renesas Electronics Europe Gmbh

Address:

Arcardia Strasse 10
40472 Dusseldorf
Germany

EU Contribution: €47,724

Technologies:

Information systems
Sustainable urban mobility planning

Development phase: Research/Invention

Key Results:

- Specification and prototypical implementation of a European architecture for cooperative systems based on COMeSafety architecture description.
- Realisation of hardware and software components robust enough for testing in field operational trials.
- Proving system interoperability with demonstration vehicles and radio modules from different partners.
- Development and verification of tools and procedures for field operational testing.
- Realisation of an integrated simulation toolset to assess safety, traffic and environmental impact of C2X communication technology and to upscale the results to the European level.
- Description of viable business models and implementation strategies for cooperative Systems technology in Europe

Innovation aspects

PRE-DRIVE C2X actively contributes to all relevant European standardisation activities in the field of Intelligent Transport Systems (ITS) to push forward the implementation of vehicular communication technology in Europe.

Strategy targets

Innovating for the future: technology and behaviour

STRIA Roadmaps:

Cooperative, connected and automated transport, Network and traffic management systems

Transport mode: Road transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Digitalisation, Decarbonisation, Safety/Security

Geo-spatial type: Other