PROJECT

EFUTURE

Safe and Efficient Electrical Vehicle

Funding: European (7th RTD Framework Programme)

Duration: Sep 2010 - Nov 2013

Status: Complete

Total project cost: €6,962,428

EU contribution: €3,952,407

Call for proposal: FP7-2010-ICT-GC

CORDIS RCN : 95487

Background & policy context:

The idea of intelligent vehicles that cope with safety requirements and adapt their energy needs is a long-term strategy.

eFuture wanted to prepare the next generation of electric vehicle based on their first prototype by creating a platform which minimised its energy needs but still optimised dynamically its decisions between safety and energy efficiency. The projects key issues was the optimisation of the energy usage and its influence on the vehicle/driver. The project had already seen that optimising each component separately would not be enough, an overall concept was mandatory to look at the interactions between the components.

Objectives:

The key objectives of the eFuture Project were threefold: 1) development of the execution layer for electric driving, 2) E/E architecture and corresponding ECUs for fully equipped electric vehicle, 3) docking of the integrating command layer with synchronisation of the decision units. Other more specific objectives were the:

- Characterisation of electric motors and other electric driving components
- Validation of drivability with synchronisation of electric motors and optimisation of the drivetrain controller
- Added value of intrusive energy management
- Added value of execution layer
- Driver acceptance of new vehicle dynamics

- Network for safety and energy usage in an electric vehicle
- Requirements on and engineering of ECUs for domain controllers
- Separation energy/data transfer in the wiring harness

- Evaluation of capacity to reconfigure the ADAS or needs of new strategy
- Added value of ADAS integration
- Fast and robust understanding of driver’s request on vehicle behaviour and assessment of the driver’s acceptance of vehicle dynamics changes during driving
- Synchronisation of command and execution layer validation of added value of time horizon

Methodology:

The project consists of 6 main working packages which provide for its methodological framework:

- WP100: Management
- WP200: Specification
- WP300: Integration
- WP400: Executive Layer
- WP500: Platform
- WP600: Command Layer

Parent Programmes:

FP7-ICT - Information and Communication Technologies

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Intedis Gmbh & Co Kg

Address:
Max Mengeringhausen Strasse
97084 Wurzburg
Germany

EU Contribution: €876,108

Partner Organisations:

Tata Motors European Technical Centre Plc

Address:
Grosvenor Place
London
SW1X 7HS
United Kingdom

EU Contribution: €673,094

Hella Gmbh & Co Kgaa

Address:
Rixbecker Strasse
59552 Lippstadt
Germany

Organisation Website:
http://www.hella.com

EU Contribution: €737,380

Miljøbil Grenland As

Address:
Heroya Industripark Bygg
3908 Porsgrunn
Norway

EU Contribution: €385,500

Wivw Wuerzburger Institut Fur Verkehrswissenschaften Gmbh

Address:
Robert Bosch Strasse 4
97209 Veitshochheim
Germany

EU Contribution: €745,400

Institut National De La Recherche Sur Les Transports Et Leur Securite

Address:
2 Avenue du General Malleret Joinville
94114 ARCUEIL
France

Organisation Website:
http://www.inrets.fr

EU Contribution: €534,925

Institut Francais Des Sciences Et Technologies Des Transports, De L'amenagement Et Des Reseaux

Address:
2, Avenue Du General Malleret-Joinville
94114 Arcueil
France

EU Contribution: €0

Technologies:

Electric road vehicles
EV light trucks and vans' structural architecture

Development phase: Validation

Documents:
1. E-E architecture for battery electric vehicles (Other project deliverable)

STRIA Roadmaps: Cooperative, connected and automated transport, Transport electrification

Transport mode: Road transport

Transport sectors: Passenger transport

Transport policies: Decarbonisation, Environmental/Emissions aspects, Digitalisation

Geo-spatial type: Other