

PTV investigates green ITS solutions

[EU project eCoMove aims to increase energy efficiency throughout the European road network](#)

Karlsruhe, Germany. February 25, 2011. Integrated solutions for green ITS (Intelligent Transport Systems) and logistics can potentially deliver up to 20% overall fuel savings and CO₂ emissions reduction. The European Union therefore initiated the research project eCoMove in spring 2010. A consortium of 32 partners will test the energy efficiency of cooperative systems and services until March 2013. PTV AG, the transportation experts from Karlsruhe, Germany, is also a member of the consortium. With its technologies the company supports three of the six sub-projects.

eCoMove is based on the idea that a driver can use the least possible fuel when travelling on a given route in a specific vehicle. To achieve this goal drivers must apply the most economical driving strategy and must be able to travel in a perfect road network. The aim of the project is to create the preconditions needed to reduce fuel consumption and carbon emissions. The project partners are currently testing several cooperative systems and their interaction in six sub-projects. Systems that allow wireless car-to-car (C2C) and car-to-infrastructure (C2I) communication are called cooperative systems.

How to use energy more efficiently

"The European Commission has funded eCoMove in order to develop an integrated solution. The aim is to increase the energy efficiency in road transport," says Michael Ortgiese, Vice President ITS Technology at PTV Germany. The Karlsruhe-based specialist for traffic and transportation planning software is involved in three eCoMove sub-projects. In this context, PTV's team of transportation experts and its partners are in charge of the development of basic technologies to be integrated into the entire project. A primary focus is on the standardisation of protocols which are used for vehicle-to-infrastructure communication. "The different stakeholders from across the European Union have been tackling the car-to-x communication issue in a very heterogeneous manner," explains Michael Ortgiese. "To be

able to implement a comprehensive sustainability concept in the field of ITS, standardisation is urgently required. We are glad to be part of that process."

Shaping future traffic and transport by means of emissions

Another sub-project deals with applications for cooperative, eco-friendly traffic management and control. This includes the development of a digital map that shows emissions. Historical and current data from traffic management, for example, are used in order to provide information on pollutant emissions. The team members of this sub-project have chosen PTV software products for transportation modelling and forecast as the basis for their technological approaches.

Minimising CO₂ emissions

However, environment experts are not only concerned about motorised private transport, but also about the CO₂ emissions produced in freight transport. Therefore, an eCoMove sub-project concentrates on ecoFreight & Logistics. The aim is to make logistics more eco-friendly by adopting a range of measures that integrate transport planning, implementation and post-assessment. To this end, PTV is currently developing a solution designed to minimise the CO₂ footprint of all transport runs. This solution takes traffic data and forecasts into account: "For example, if there is a construction site within a specific route section, this will have an impact on the road network", says Michael Ortgiese. "Sustainable transportation planning must take this information into account because traffic flow can stagnate in this area. Subsequent traffic jams will lead to higher CO₂ emissions and will cost time and money." In coordination with a city logistics portal the calculated and optimised transport run data will then be transmitted to the truck while flexibly reacting to current updates. "We are planning to define the specification by spring 2011. And then everything will be implemented," says Michael Ortgiese.

As part of the eCoMove project experts are also developing solutions for efficient driving behaviour and testing the use of a virtual driving instructor. Moreover, the consortium is evaluating the interaction of driving behaviour, mobility and road network by taking environmental aspects and costs into consideration. eCoMove started in April 2010 and is scheduled to be completed by March 2013. The project is part of the 7th framework programme of the European Commission. The total costs amount to €22.5 million of which €13.7 million are funded by the EU.

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Press image:



The EU project eCoMove tests the interaction of cooperative systems like car-to-car communications. In this case vehicles communicate wireless to each other.

Background information:

eCoMove is an EU project of the 7th framework programme of the European Commission. Its aim is to test the energy efficiency of cooperative systems and services. eCoMove is the so-called "green" follow-on project of CVIS, a research project of the European Commission that investigates how vehicle-infrastructure can assist the next generation in coping with the challenges in urban transport. 32 partners are involved in the eCoMove project. ERTICO – ITS Europe is responsible for the project coordination. Further partners are: ASFA, AVL LIST, BMW Research and Technology, Robert Bosch, Cobra Automotive Technologies, Continental Automotive, Centro Recherche FIAT, CTAG, DAF Trucks, DLR, Ford Research Centre Aachen, GoGreen Trafik & Miljö, IKA, Logica, Magneti Marelli, MAT.TRAFFIC, Meta System, Navteq, NEC, PEEK Traffic, PTV AG, Q-Free, Fundacio' Privada RACC, Fundacion Robotiker, Technolotion, Tele Atlas, Telecom Italia, TNO, Technical University of Munich, VIALIS and VOLVO Technology. In six sub-projects they work on solutions for green ITS (Intelligent Transportation Systems). In addition to the coordination, there are the sub-projects Core Technology Integration, ecoSmart Driving, ecoFreight and Logistics, ecoTraffic Management and Control as well as Validation and Evaluation. The project started in April 2010 and will last until March 2013. The total costs amount to €22.5 million of which €13.7 million are funded by the European Union.

Your contact for further information:

Internet: www.ptv.de

E-Mail: public.relations@ptv.de

Kristina Stifter
Corporate Communications Vice President
Tel.: +49-721-9651-565
kristina.stifter@ptv.de

Sonja Koesling
Corporate Communications PR Consultant
Tel.: +49-721-9651-7353
sonja.koesling@ptv.de

PTV Planung Transport Verkehr AG
Stumpfstr. 1, 76131 Karlsruhe

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PTV Planung Transport Verkehr AG

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Strong international demand has fuelled dynamic growth: PTV currently has over 700 employees worldwide crafting innovative solutions for its customers in the public and private sectors. Our Karlsruhe headquarters acts as a development and innovation centre with tight links to research and educational institutions. We additionally maintain shareholdings and subsidiaries in Germany, Europe and every continent in the world.

In the Traffic Software, Transport Consulting and Logistics Software business fields, PTV technology forms the foundation of a host of brand-name products and our own leading map&guide and PTV Vision product lines.

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