

European CVIS project offers cooperative mobility

CVIS, European flagship project for Cooperative Vehicle-Infrastructure Systems, showcased its first achievements at the Stockholm ITS World Congress, including the latest technology and application development for cooperative mobility, and Europe's first universal open platform for vehicle-to-infrastructure communication and services.

The CVIS project designed, developed, and is testing technologies that enable drivers to interact directly with local traffic management systems, and receive recommendations on the best route to their destination, thus helping to reduce road congestion. This project, co-funded by the European Union and coordinated by ERTICO—ITS Europe (www.ertico.com), has created a universal communication unit for both in-vehicle and roadside use, featuring multiple communication interfaces, innovative positioning techniques, and tools for the development of application software.

The CVIS technologies and applications developed over the last years are now in the testing phase at valida-

tion sites in Europe. One demonstration showed how a seamless internet connection is maintained while hopping between a 3G/UMTS cellular network and short- and medium-range communications based on mobile wireless LAN. This demonstration used the newly reserved European ITS band around 5.9 GHz, commonly called DSRC (Dedicated Short Range Communication). A smooth handover between infrared and 3G cellular communication will also be shown.

Other demonstrations featured enhanced positioning, real-time maps and location referencing. This technology can provide high-precision positioning solutions that are accurate to under one meter. Applied in a car, such technology could help the driver to stay in its lane.

The potential of cooperative mobility was further illustrated during the ITS World Congress through a cooperative systems play at the Demonstration Theatre, where the audience saw how different stakeholders can best collaborate to improve traffic safety and efficiency, and reduce

environmental impact. Following more than three years of development and testing, the Stockholm ITS World Congress marked the launch of the CVIS platform for use by other projects needing an adaptable development prototype for both vehicle-to-vehicle (V2V) and/or vehicle-to-infrastructure (V2I) applications. Cooperation agreements are in place or in preparation with over ten project and commercial users external to the CVIS consortium.

As well as preparing the technologies and applications for demonstrations during the immediate future, the CVIS consortium is preparing the way for deployment. As CVIS Coordinator Paul Kompfner of ERTICO said, "the deployment of cooperative technologies holds the promise of many new benefits. But to enable widespread and rapid deployment we need first to overcome some barriers. Users will need to find cooperative mobility services useful, affordable, and user-friendly, and not threatening. There needs to be a positive business case for all investors, both public and private. Standards need to be in place to ensure interoperability, and services must be widely available across Europe." **TIH**

SAFETY

Volvo takes on the challenges of electric cars

Volvo (www.volvocars.com) is conducting wide-ranging and thorough analysis of a variety of safety scenarios for cars with electric power. Through advanced automatic monitoring of battery status and by encapsulating the battery packs and protecting batteries effectively in a collision, the result is a comprehensive safety package. Volvo imposes the same high safety standards on all its products irrespective of car type,

fuel, or power source. The aim ahead of the launch of any new car model is to improve safety for the vehicle's occupants. Having said that, the safety-related challenges may differ depending on the type of driveline and fuel being used.

"A holistic approach and real-life traffic conditions are always the starting-point for Volvo's safety work. Based on our massive database featuring input from actual road accidents,

we know where the focus must lie in everyday traffic conditions. The solutions we have developed for our forthcoming electric cars therefore take into account the situations that are unique to this type of car," says Volvo Cars' safety expert, Thomas Broberg.

For Volvo's safety engineers, work on a new power source is not particularly dramatic. Rather, tried and tested working methods are applied in a well-oiled process to obtain the best results. At the same time, work on electrification is naturally being approached with a great deal of humility and open-mindedness. Everything

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