



European “CVIS” Project Shows the Cooperative Way to Mobility

Press Release

Stockholm, 22 September 2009.

CVIS, European flagship project for Cooperative Vehicle-Infrastructure Systems, will showcase 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 has designed, developed and is testing novel technologies to 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, 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 validation sites across Europe. Today in Stockholm, CVIS is presenting the world’s most extensive demonstration of vehicle-infrastructure communication, applications and services. One demonstration will show 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 will use 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 will feature enhanced positioning, real-time maps and location referencing. This technology can provide high-precision positioning solutions, accurate to under one meter. Applied in a car, such technology could help the driver to stay in lane, and would greatly improve the accuracy of safety systems such as lane departure warning.

To illustrate the unlimited potential for future cooperative applications and services, a CVIS “Public Road Tour” will take visitors on a 15-minute circuit around the World Congress venue, where they can see the following applications in real life: Road User Charging, Intermodal Traveller, Access to Green Zones, Danger Wrong Way Driver, Carpool Matcher, Children on the Road Warning, Local Commercial Advertisement and Parking Space Booking.

The potential of cooperative mobility is also illustrated during the ITS World Congress through a cooperative systems play at the Demonstration Theatre where the audience can see how different stakeholders can best collaborate to improve traffic safety and efficiency, and reduce environmental impact.

Visitors should also drop in on the joint CVIS-SAFESPOT exhibit on the European Commission stand in Stockholm. Here they will be able to see a truck that visitors can drive in a simulated world, a traffic light powering the cooperative road of the future, and a video wall explaining cooperative applications and technologies.

Innovative new services can be easily designed and developed using the CVIS technology platform. As proof, on Thursday 24 September at 15:30 the winners will be announced of the CVIS Application Innovation Contest. Prizes will be awarded to the four finalists who have developed applications as diverse as Multi-modal Vehicle Social Networking, Pedestrian Crossing Warning, Evolutive Vehicle Assistant/Eco-driving and Commercial Vehicle Agent System.

Following more than three years of development and testing, the Stockholm ITS World Congress marks 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 preparation with over ten project and commercial users external to the CVIS consortium.

As well as preparing the technologies and applications for demonstrations during 2009 and 2010, the CVIS consortium has also been helping prepare the way for deployment. As CVIS Coordinator Paul Kompfner of ERTICO says, " *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. Lastly, key stakeholders need to agree on a common deployment roadmap to avoid the "chicken-egg" problem of "who goes first..."*

CVIS marks the start of a new era, when cooperative mobility systems deployment will bring fewer traffic accidents, lower congestion delays and costs, and reduced fuel consumption and pollutant emissions. For a preview, join us in Stockholm to catch a glimpse of this future - come and experience "CVIS Live!"

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Notes to the editor

[About ERTICO - ITS Europe](#)

ERTICO - ITS Europe, a multi-sector partnership dedicated to the development and deployment of intelligent transportation systems and services (ITS). ERTICO supports the development and deployment of ITS solutions to achieve safe, efficient, clean, secure and affordable cooperative mobility in the EU and beyond.

[About the CVIS \(Cooperative Vehicle-Infrastructure System\) project](#)

CVIS is an integrated R&D project co-funded by the European Union under the ICT (Information and Communication Technologies) priority of the 6th Framework Programme for Research. With a budget of over €40 million and a consortium of over 60 leading industrial, public and academic organisations, CVIS will complete its 4-year programme in early 2010. CVIS is coordinated by ERTICO-ITS Europe.

CVIS aims to design, develop and test the technologies needed to allow cars to communicate with each other and with the nearby roadside infrastructure. CVIS' achievements will be applied in test sites in seven countries across Europe, to increase road safety and efficiency and reduce the environmental impact of road transport.

[WLAN 802.11p](#) provides wireless access for cars, trucks and trains and was developed to support intelligent transport systems. This includes data exchange between high-speed vehicles and between the vehicles and the roadside infrastructure in the licensed ITS band of 5.9 GHz (5.85-5.925 GHz).

[European Commission decision on ITS radio frequency allocation](#)

The EU Commission decided last August 2008 to allocate a single radio frequency band for vehicle communication systems across Europe (5.9 GHz). They are based on wireless communication technology and allow cars to 'talk' to other cars and to the road infrastructure providers.

[Dedicated short-range communications \(DSRC\)](#) are one-way or two-way short- to medium-range wireless communication channels specifically designed for automotive use and a corresponding set of protocols and standards. It offers communication between the vehicle and roadside equipment. It is a sub-set of the RFID-technology. This technology for ITS applications is working in the 5.9 GHz band (U.S.) or 5.8 GHz band (Japan, Europe). Former standard used the 915 MHz band. Currently its main use in Europe and Japan is in electronic toll collection. DSRC systems in Europe, Japan and U.S. are not, at the present moment, compatible.

[3G is the third generation](#) of standards and technology that is based on the International Telecommunication Union (ITU) family of standards. 3G networks enable network operators to offer users

a wider range of more advanced services that include wide-area wireless voice telephony, video calls, and broadband wireless data, all in a mobile environment. 3G networks are wide-area cellular telephone networks that evolved to incorporate high-speed Internet access and video telephony.

[UMTS \(Universal Mobile Telecommunications Service\)](#) is a third-generation (3G) broadband, packet-based transmission of text, digitized voice, video, and multimedia at data rates up to 2 megabits per second (Mbps). UMTS offers a consistent set of services to mobile computer and phone users, no matter where they are located in the world. UMTS is based on the Global System for Mobile (GSM) communication standard.

