



## “CVIS” EU Project Helps Cars to Talk

### Press Release

*Berlin, 11 December 2008.* CVIS, European flagship project for Cooperative Vehicle-Infrastructure Systems, today hosts a live demonstration of Europe's first universal platform for vehicle-to-infrastructure communication and services.

The CVIS project has designed and developed, and will now test the 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, has created a mobile router with multiple communication interfaces, innovative positioning techniques and supporting services for the development of application software.

The CVIS technologies and applications developed over the last two and a half years are now moving into the testing phase. For the first time in a public demonstration, CVIS is able to present two cars communicating with each other and with the road infrastructure. This first demonstration will show how a seamless connection can be maintained while hopping between a 3G/UMTS cellular network and short- and medium-range communications based on mobile WLAN. This demonstration will use the newly-reserved 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.

Another demonstration will feature enhanced positioning, real-time maps and location referencing. This demo will show 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.

The universal platform developed by the CVIS project is capable of connecting continuously and seamlessly using a wide range of communication media, including mobile cellular and wireless local area networks, short-range microwave or infrared. The CVIS universal platform is a major step towards mature car-to-car and car-to-infrastructure communication and services. Launched today to potential users beyond the CVIS consortium, this platform will be available for any current or future project needing a development prototype readily adaptable for both vehicle-to-vehicle (V2V) and/or vehicle-to-infrastructure (V2I) applications.

Paul Kompfner, CVIS Project Manager of ERTICO says: *“The deployment of such technologies holds the promise of many new benefits. It is expected to lead to the development of many new and enhanced in-car and cooperative services for increased road safety, efficiency, and traveller convenience.”* When communicating vehicles and infrastructure can produce and share real-time traffic and environment information, we expect to see fewer traffic accidents, lower congestion delays and costs, and reduced fuel consumption and pollutant emissions.

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## Notes to the editor

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### [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.

