



# The future is 'cooperative' mobility



**M**obility helps drive European growth and competitiveness, and is a vital component in realising further European integration and achieving a single European market. To keep our cities both alive and liveable, people and goods need to be able to move about freely while not imposing unacceptable costs on safety, efficiency or the environment.

Hermann Meyer, ERTICO CEO, sees a 'cooperative mobility system' as the ultimate aim, where the traveller has easy access to all relevant information for their mobility needs and mobility services are well connected and coordinated. He believes passionately that without prompt deployment of ITS solutions, a huge opportunity to improve the safety, security and environmental performance of individual transport modes will remain unrealised.

Since the start of 2008, ERTICO has been working to make its vision more targeted and its plans more ambitious. It is committed to successfully supporting the deployment of ITS solutions for safe, efficient, clean, secure and affordable cooperative mobility.

Cooperative mobility systems will enable vehicles to interact locally and directly with traffic control equipment, collect and share real-time data, as well as provide increased traveller support and integrated network management. These systems will improve safety and energy efficiency, and unlock new perspectives for synergy between transport modes. Successful and rapid implementation will require a sound basis of existing ITS deployment and a 'can-do' attitude amongst local stakeholders.

## Cooperative mobility systems lead the way

To pave the way, cooperative mobility systems using vehicle to vehicle (V2V) and vehicle to infrastructure (V2I) communications are the highest priority in EU-funded information and communication technologies R&D programmes. It is worth a total €100m, including the ERTICO-coordinated CVIS project.

The Cooperative Vehicle-Infrastructure Systems integrated project (IP) consortium (including more than 30 ERTICO partners) is designing, developing and testing the technologies needed to allow vehicles to communicate and form a network, and thus to cooperate directly with roadside infrastructure. It is expected to lead to new and enhanced in-vehicle services for

better safety, efficiency, and convenience.

Cities can especially benefit from cooperative mobility systems as they have the greatest needs and consequently the greatest potential for improvement. The CVIS sub-project CURB (Cooperative Urban Applications) is defining applications for urban areas, and in particular the closer integration of vehicles within the traffic control functions of the urban scenario.

This works in both directions: high-precision location and movement data transmitted continuously from vehicles to roadside units provides an alternative, more accurate means for vehicle detection than today's inductive loops and video cameras. But traffic management and information services return the compliment, providing drivers with route recommendations based on the current traffic situation and traffic management strategies, defined and evaluated on far more complete and up-to-date knowledge of the status of the road network and the traffic on it.

Following the recent 2008 annual review of the CVIS project held in Gothenburg, Sweden, IP coordinator Paul Kompfner commented on the excellent team effort that culminated in a live demonstration of high quality video transmission from the Volvo Trucks test vehicle to the control centre at Lindholmen Science Park. 'The reviewers and the consortium partners got a "wake-up call" to start developing real-life cooperative system applications and services, since clearly the basic technologies were almost ready to go to the market.'

The closely-related SAFESPOT integrated project is studying how intelligent vehicles and intelligent roads can cooperate to produce a breakthrough in road safety. The aim is to prevent road accidents by giving drivers a 'Safety Margin Assistant' that detects potentially dangerous situations in advance, and extends in space and time, the driver's awareness of the surrounding environment. The SMA will be a mixture of autonomous and Intelligent Cooperative Systems based on V2V and V2I communication.

## Showcasing the future of cooperative mobility

None of the enormous potential of cooperative mobility systems will come to fruition unless the potential deployment and user communities are made aware of their benefits. ERTICO is therefore planning to organise a cooperative mobility

showcase event based on the EU-supported R&D projects such as CVIS, SAFESPOT and COOPERS, on national R&D programmes such as AKTIV, SIM-TD, IVSS and PREDIT, as well as the Car-to-Car Communication Consortium. The event will feature demonstrations of V2V and V2I technologies, to create innovative cooperative services for the urban, inter-urban, commercial and public transport domains.

Paul Kompfner, head of development, is convinced that ERTICO is uniquely placed to mount a world-class event able to convince professionals, politicians, and the general public of the effectiveness of cooperative systems, and their use as tools for public policies.

## Stepping out for cooperative mobility policy and deployment

After solid progress on research and development, and current initiatives for awareness-building, ERTICO is also raising cooperative mobility as a policy concern for governments and administrations across Europe. In February ERTICO's new CEO presented his cooperative mobility vision to the European Parliament's Transport Committee in a hearing on the Urban Mobility Green Paper.

One of ERTICO's key messages has been that deployment of cooperative mobility systems can only take off if plans are synchronised and the stakeholders work in new kinds of partnerships.

The newly-created ERTICO Partner Topic Groups have been tasked to define critical needs and actions to enable and promote deployment in four priority areas; mobility of people, goods transport, security and the environment. The PTGs will also provide a platform for stakeholders to exchange ideas to increase the benefits and marketability of cooperative mobility systems.

CEO Meyer concludes: 'Realising the vision of a fully-deployed cooperative mobility system is not beyond our reach provided we all work together. The time is right to move beyond R&D projects, to deployment of a wide range of accessible ITS services.'

There is a global relevance to ERTICO's drive to deploy cooperative mobility systems: Europe is already in the lead for much technical development in this domain, and the prize for early realisation of cooperative system products will also confer a competitive advantage in home and global markets for the industrial stakeholders.



## Six-country trials end in success

**E**urope's Road Charging Interoperability (RCI) project has successfully completed its 5000km six-country demonstration of interoperable charging in action. Two trucks fitted with on-board units (OBUs) from suppliers' consortia T2ASK and FEQ, finished the circuit. They had to overcome minor problems such as batteries or communications – usually put right within hours – and some adverse weather.

The OBUs were tested on six RUC systems: ASFINAG (Austria); LSVA (Switzerland); TELEPASS (Italy); TIS (France); Toll Collect (Germany); and VIA-T (Spain).

ERTICO-ITS Europe-based project coordinator Oene Kerstjens commented: 'This functional demonstration and validation of an open architecture for interoperabil-



Trucking test for RUC interoperability

ity reflecting the real requirements of six of Europe's major existing operators should provide the necessary confidence in the added value

and technical feasibility of interoperable solutions for road charging.'

A comprehensive report on the results is expected this month

(June). A supporting UK demonstration has yet to publish its results.

[www.ertico.com/rci](http://www.ertico.com/rci)

## V2I demo planned for Geneva

**I**TS in Europe (4-6 June 2008) in Geneva will host the latest demonstration of vehicle-to-infrastructure communication using the CVIS (Cooperative Vehicle-Infrastructure Systems) communication platform. CVIS partners Peek Traffic and Q-Free will use their stands, which face one another, to play the roles of car

and roadside control unit, exchanging information using CALM M5 technology. The aim is to improve the quality of webcam images from the vehicle, show a range of messages on an in-vehicle display, add sound to textual messages, introduce radar-based detection of pedestrians, and demonstrate local dynamic map (LDM)

functionality, using a traffic controller's TFT screen to incoming messages wirelessly arriving from the car.

ERTICO-ITS Europe is coordinating the EU-supported CVIS project.

[www.cvisproject.org](http://www.cvisproject.org)

[www.peaktraffic.nl](http://www.peaktraffic.nl)

[www.q-free.com](http://www.q-free.com)

## Safety toolbox call

**T**he ERTICO-administered eSafety forum is calling for the creation of a Europe-wide ITS 'toolbox' to help trigger deployment of eSafety systems. It notes that ITS implementation rates vary widely as between EU Member States with new arrivals 'lagging far behind in ITS infrastructure'.

It also wants to see a roadmap for the development of ITS infrastructures, covering a minimum set of functionalities, to create a level playing field. The forum met recently in Ljubljana, Slovenia, to provide specific safety-related input to the EC's action plan on ITS, currently in preparation.

The forum has extended its initial road safety mission, and set up a dedicated working group to investigate how ICT applications can contribute to cleaner and more efficient mobility. It plans to produce recommendations in due course.

● The deadline for submissions for the 2008 eSafety Awards is 1 October 2008.

[www.esafetysupport.org](http://www.esafetysupport.org)

## Map errors could be fixed more easily

The EC-supported and ERTICO-ITS Europe coordinated FeedMAP project has successfully presented its most recent results in Brussels. It focusses on the technical and commercial feasibility of correcting map deviations through automatic feedback from vehicles.

While today's digital maps are generally stored on DVDs or hard

disks, with periodic updates only available on replacements, new updating mechanisms currently being investigated are expected to reach the market within the next few years. The FeedMAP approach aims to establish criteria for these.

Types of map deviation being covered include wrong, missing or outdated road geometry; alti-

tude and slope; one-way information; points of interest; traffic signs; turn restrictions; speed limits; lane directions; route guidance; roadworks and congestion information; and hazard or weather condition advice. The project even aims to be able to deal with situations where scenic attributes of roads do not match real-world subjective perceptions.

## ROSATTE website goes live

**T**he ROSATTE project (Road Safety Attributes Exchange Infrastructure in Europe) has launched a website ([www.rosatte.eu](http://www.rosatte.eu)). The 30-month initiative, co-financed by the EC Directorate-General for the

Information Society & Media, and coordinated by ERTICO-ITS Europe, aims to ensure a reliable and quality-assured data supply chain for safety-related road content to flow from public authorities to commercial map providers.

This will provide them with the key road safety attributes, incremental updates and the supporting tools necessary for easy, Europe-wide access to critical information.

[www.rosatte.eu](http://www.rosatte.eu)