



## Identifying ITS Opportunities for the HA Pilots Newsletter: December 2009

### ■ ITS RADAR INTERNATIONAL PROJECT

This project is providing intelligence for the Highways Agency on ITS developments in Europe and around the world. It is carried out by TRL and AECOM on behalf of the HA. The project summarises key information for decision makers and practitioners on activities related to Intelligent Transport Systems (ITS). The project covers specific areas of key interest to the HA.

Regular newsletters are being produced, covering information which is in the public domain. For more information about the project and the services provided, the web site can be reached at: [www.highways.gov.uk/itsradar](http://www.highways.gov.uk/itsradar).

To contact us and let us know what you would like this project to deliver please email us at: [ITSRadarInternational@trl.co.uk](mailto:ITSRadarInternational@trl.co.uk)

### ■ ABOUT PILOTS

Developments in innovative pilot projects for ITS technologies and services from around the world are monitored and reported here.

These pilots are used to test and assess the potential and impacts of newly developed services before they are deployed for widespread use by the travelling public and those who manage the transport system.

Intelligence on such pilots supports the development of new systems and services in the Highways Agency and on the road network.

Note that pilots and demonstrations which are part of European Research Programmes can be found in the European Research Newsletter.

### ■ PROJECTS

#### **Highways Agency awarded EasyWay gold star trophy**

Source: [www.easyway-its.eu](http://www.easyway-its.eu)

The Highways Agency was awarded an exclusive EasyWay award for its ATM (Active Traffic Management) pilot project on the M42 in the category "the Best Traffic Management Project in Europe". The Award Ceremony took place on 17<sup>th</sup> November 2009 at the 2<sup>nd</sup> EasyWay Annual Forum in Vienna.

The ATM project was recognised for its world-class standard of design and implementation and for the importance of the results. There are a number of reported benefits as a result of the use of hard shoulder and other managed

motorway tools on the M42, including more reliable journey times and improved safety. In addition, use of hard shoulder as a running lane provides more capacity, and compared to a traditional widening scheme, is characterised by a lower environmental impact and lower capital costs.

Keywords: Environment, Project, Safety, Traffic Management

## **SARTRE - automated road train development**

Source: [BBC News](#); Professional Engineering, 4 November 2009, pg. 43

An EU-financed research project – SARTRE (Safe Road Trains for the Environment) is looking at possible ways of creating road trains on European roads. These trains would consist of up to eight vehicles of different types being led by a single lead vehicle.

The lead vehicle would be driven by a professional driver who would monitor other vehicles in the convoy. Each vehicle in the convoy would be controlled by the lead vehicle through ITS and cooperative vehicle to vehicle (V2V) systems. The aim is to make these platoons active so that vehicles can join and leave at any time. While the vehicles are in the platoon, their drivers would not need to drive.

Funded under the European Commission's 7<sup>th</sup> Framework Research Programme, SARTRE is aimed at commuters in cars who travel long distances to work every day but will also look at ways to involve commercial vehicles. The EU hopes that road trains will deliver several benefits including:

- Improved traffic flow
- Reduced journey times
- Reduced number of accidents
- Improved fuel consumption
- Reduced CO<sub>2</sub> emissions
- Greater comfort to drivers.

The SARTRE project will run for three years with trials expected to be held on test tracks in the UK, Spain and Sweden towards the end of the project. There are also plans for public road trials in Spain.

The project partners are currently doing preliminary research to find out all the elements needed for a working system and the situations in which it might be used.

More information on the project can be found on the [RICARDO web site](#) and the [Green Car Congress](#) .

Keywords: Cooperative vehicle systems, European Commission, In-vehicle systems, Project

## **Variable Signs to improve Ontario Highway Safety**

Source: [www.roadtraffic-technology.com](http://www.roadtraffic-technology.com)

The Ontario Ministry of Transportation in Canada is planning to install 10 new full-colour electronic Variable Message Signs (VMS) on a number of highways by the end of 2010, aimed at improving readability in challenging conditions. Such signs are expected to significantly improve safety and driving

experience. Studies indicate that VMS signs reduce collisions by approximately 12%. The Canadian firm Black & McDonald will provide the VMS signs under a \$6.2m contract.

Keywords: Enforcement, Traffic information, Traffic management

### **GPS to reduce young driver insurance by 40%**

Source: [www.techradar.com](http://www.techradar.com)

i-kube is a GPS device developed by Motaquote in conjunction with the RSA insurance group, aimed at 17-25 year old drivers, that means they could pay up to 40% less for insurance. The majority of the reduced price comes from preventing the driver from driving in 'red hours' between 11pm and 5am unless they pay £45 per time. Department for Transport statistics show that compared with drivers over 25, a larger proportion of accidents involving young drivers occur at night.

Keywords: Galileo, In-vehicle systems, Safety

### **New road charging technology on Utah I-15 based on Radio Frequency Identification**

Source: World Highways, October 2009, pg. 13

Utah Department Of Transportation (UDOT) in the United States is to convert the existing Interstate 15 Express Lanes decal system to an electronic, Radio Frequency IDentification (RFID)-based payment system, the first of its kind in Utah. The project will cost US\$16 million and should be ready by the autumn 2010.

The old system was based on a fixed monthly fee to buy a pass. The new RFID system will allow dynamic pricing depending on traffic conditions and drivers will only pay for what they use. It is hoped that this will encourage drivers to reduce or re-time trips, which should reduce congestion and travel times.

Keywords: Identification, Payment

### **The role of Dedicated Short Range Communications in vehicle safety systems**

Source: Traffic Technology International, October/November 2009, pg. 51

Dedicated Short-Range Communications (DSRC) trials are taking place in Europe, the USA and Australia and will enable vehicles to communicate with each other and road-side infrastructure. DSRC is a type of wireless communications system which runs at 5.9GHz and which has been developed specifically for ITS applications.

As well as supporting many convenience and safety information systems, the greatest benefit of DSRC could be from supporting active safety systems such as lane departure correction and collision avoidance systems. DSRC enables a vehicle to broadcast safety messages 10 times a second, which enables the in-vehicle systems to intervene automatically, as well as see 'around corners' and 'through other vehicles'.

Keywords: Communications, Cooperative Vehicle Systems, Incident, In-vehicle systems

## ■ RECENT PUBLICATIONS

### **Mileage-related heavy vehicle charges in Switzerland**

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

From summer 2010 the On-Board-Unit (OBU) for distance based charging of heavy goods vehicles in Switzerland is being upgraded. The Tripon units which were first tested in 2000 are planned to be replaced by a new unit called Emotach. The new OBU improves communications with road-side beacons and provides operators with useful logistics data. A pilot project is currently being undertaken involving field trials with 800 vehicles before mass production of the new OBU begins.

Keywords: Freight, In-vehicle systems, Payment

## ■ GLOSSARY

ATM	Active Traffic Management
DSRC	Dedicated Short Range Communications
GPS	Global Positioning System
OBU	On-Board-Unit
RFID	Radio Frequency Identification
SARTRE	Safe Road Trains for the Environment
UDOT	Utah Department of Transportation
VMS	Variable Message Sign