



Identifying ITS Opportunities for the HA ITS Research: March 2010

■ 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.

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

■ ABOUT ITS RESEARCH

The research projects covered in the European Research newsletters are mainly those which receive funding from the European Commission, through programmes such as the Seventh Framework Programme, EasyWay (implementing ITS on the Trans-European Network) and the e-Safety initiative. Updates on European ITS research projects aim to inform the Highways Agency about project progress and notify when significant milestones and deliverables are achieved. News of newly launched and forthcoming ITS projects are reported to keep the HA up to date with the latest research being carried out in Europe.

■ GUEST AUTHORS

To involve readers more in the ITS International Service, staff in the HA and its supply chain are encouraged to contribute articles for publication in the newsletters. This month, the article about MESA has been provided by John Slip from the Highways Agency.

■ MEETINGS

eSafety Demonstrations 13 July 2010

Source: [Thinking Highways](#)

The eSafety Challenge 2010 will take place at the Milbrook Proving Ground on 13 July 2010. The event will include:

- eSafety demonstration
- International eSafety conference
- Hands on driving experience for the participants
- eSafety exhibition
- eSafety awards
- Launch of results from new eSafety studies.

More information on the event and registration details are available on the [eSafety Challenge website](#).

HA to consider attending

European conference on human centred design for ITS 29 - 30 April 2010

Source: [ERTICO](#)

The second European conference on Human Centred Design for Intelligent Transport Systems (ITS) will be held in Berlin over 29 to 30 April 2010.

The aim of the event is to gather the community of Human Factors researchers, to offer an overview of the current developments and trends and to create an area for discussions and debates on these topics. The conference is organised by HUMANIST, an EC-funded project which focuses on exchanging information on human centred design for ITS.

During the conference, the following topics related to Human Centred Design for ITS will be addressed:

- Effects of ITS on driver behaviour and interaction with the systems
- Tools and methodologies for safety and usability assessment
- Modelling of drivers' behaviour for ITS design
- Diversity and specificity of road user groups
- Drivers' needs and acceptance of assistance functions
- Green ITS to meet new driver needs
- Field Operational Tests and Naturalistic Driving studies
- ITS and traffic management
- Human-Centered System Integration and Product maturity
- Generic user Interfaces for Assistance Systems.

Further information is available on the [event website](#).

ITS Radar International will monitor the outcome

■ CALLS FOR PROPOSALS

No new Calls for Proposals.

■ HOT TOPICS

Forecast device drives road safety

Source: [the Engineer](#)

The EU-funded project 'Friction' has developed a system that enables cars to determine weather conditions and adjust speed accordingly. The objective of the project is to create an on-board system for estimating friction and road slipperiness to enhance the performance of integrated and cooperative safety systems like vehicle-to-vehicle communication, and driver information.

The project has developed a system that uses three different sensors to determine the conditions of the road:

- Using laser to illuminate a spot on the road with two different wavelengths of infra-red light
- Using a camera that detects polarised light reflected from the road about 25m ahead
- Using a radar system operating at 24GHZ to compare the amount of energy reflected back from the road surface at two different polarisation angles.

Combined, these sensors have been found to distinguish successfully between dry, wet, icy or snowy road conditions. Some car manufacturers are expected to introduce friction-sensing features to their safety packages in the next few years.

More information can be found on the [Friction project website](#).

ITS Radar International will continue to monitor 'Friction'

■ PROJECTS

EU's advanced active safety project begins

Source: www.roadtraffic-technology.com

The Accident Avoidance by Active Intervention of Intelligent Vehicles (interactIVe) project is an initiative of a Ford-led consortium of companies, aimed at development of cutting edge incident avoidance and mitigation technologies. Active safety intervention such as autonomous braking and steering in difficult conditions will be tested. This €30m, 42-month project will also support the development of the latest technologies for 'environmentally sensitive' driving.

ITS Radar International will monitor interactIVe

Project MESA summary

Source: Highways Agency, john.slip@highways.gsi.gov.uk

Project MESA is an international standardisation forum for the development of broadband wireless communications for use in incident management and disaster response. It aims to design a self-establishing, self-healing digital mobile broadband network, which can be used at "hotspots", such as road accidents, natural disasters and chemical spills.

This month, John Slip of the Highways Agency provides an update on the next phase of on-road trials of MESA in the UK:

The technology behind the MESA concept offers the facility to design a high-bandwidth, self-healing mobile communications network applied to highways incidents on the strategic road network, the objective being to explore a more resilient method of communication for the Highways Agency Traffic Officer Service.

Robust communications enhances incident management i.e. timely provision of accident location & severity information; information sharing between those attending incidents; communications/updates on the situation in order to provide accurate information via an incident control centre to the media and road users; interworking between the emergency services, Traffic Officers and Incident Support Units involved in managing and clearing of network incidents.

The global Project MESA initiative was ratified as an international partnership agreement in January 2001. Some UK blue light services are already aware of the European MESA project and current membership includes police, fire and ambulance services as well as various disaster relief/co-ordination organizations and equipment providers.

Alongside these stakeholders the Highways Agency is a member of the international MESA project and consultants have been appointed to investigate the potential of adopting this system for enhancing the communication, and thus the management of, incidents on the strategic road network.

Currently, there is no standard communication and management infrastructure across all the emergency services. Even with current radio technology, the level of communication is restricted to narrowband, giving limited voice and very low-rate data capability.

The MESA technology indicates a more resilient communications environment for incident management on the road network. Most radio networks require a fixed infrastructure and if this is unavailable due to poor coverage, interference or a power outage, the users' radios are rendered useless. Existing radio systems are repeater-based and sometimes provide poor coverage during a given highway emergency.

When managing an incident over a length of network, responders such as emergency services, Traffic Officers and Incident Support Units cannot necessarily communicate directly. Existing radio systems are low bandwidth, hence remote incident management is difficult or impossible. Using cellular phones as a 'back-up' could be unwise when managing a very major incident as it could block or clog up networks.

Therefore the Agency's desire is to have the option of implementing an alternative wireless broadband communications technology that might also enhance integrated communications between the emergency services and their Regional and Network Control Centres.

[Consultation with Stakeholders.](#)

MESA Phase I, examining the potential and availability of this technology, was completed in March 2007. Phase II, stakeholder consultation and basic

technology demonstration, was completed in April 2008. Phase III has recently completed off-road trials of the system as well as a more extensive demonstration to internal HA parties who have expressed an interest.

The Way Forward.

The next phase of this project intends to provide an on-road trial of the technology carried out on a 'live' carriageway over a selected stretch of the motorway network. If it is eventually decided that MESA is a viable option for the Highways Agency to adopt, implementation is by no means imminent and will be dependant upon creating a successful business case, obtaining the necessary approvals, funding and procurement processes. MESA will grow slowly, influenced by commercial market forces driven by the major communications companies, and not by the Highways Agency. There are potentially great business benefits of the agency subscribing to a MESA system, especially from the inter-working point of view, but for the foreseeable short term future it will not replace the Airwave TETRA (restricted to 'voice only') system.

ITS Radar International monitors the latest news and developments in Project MESA, and a Fact Sheet and previous articles can be found here:

www.itsradarinternational.info/.

ITS Radar International will continue to monitor developments

■ RECENT PUBLICATIONS

No recent publications.

■ GLOSSARY

CCTV	Closed Circuit Television
EU	European Union
HA	Highways Agency
MESA	Mobility for Emergency and Safety Applications