



**eSafety Forum: 5th Plenary Meeting
2nd – 3rd May 2006
Conference Report**

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1 Introduction

The HA EUWATCH project is providing intelligence for the Highways Agency on developments related to Intelligent Transport Systems (ITS) in Europe and is carried out by TRL Limited on behalf of the HA. The project summarises key information for decision makers and practitioners on activities related to ITS in Europe and identifies opportunities for the HA to become more involved in Europe.

In response to an invitation from the eSafety Forum for road operators and other stakeholders to become more involved in eSafety, HA EUWATCH attended the 5th plenary meeting of the eSafety Forum on behalf of the Highways Agency.

The 5th plenary meeting took place in Brussels on 2nd and 3rd May 2006 and was attended by approximately 100 people. The delegates included road operators and authorities, national ministries, the European Commission, national R & D institutes, motor manufactures, equipment suppliers, ITS organisations, standardisation bodies and mapping agencies. The aim was to strategically review progress towards the overall goal of fatality reduction and also to reflect on future plans.

For background, there are still approximately 41,000 deaths per year in the EU, and in the new Member States the death rates are twice that (per km) than in the UK. The eSafety initiative encompasses a range of projects and approaches to provide a forum for a comprehensive and consistent approach to improving safe mobility.

2 Opening Statements

Opening remarks were made by representatives of the European Parliament, ACEA (vehicle manufacturers), ERTICO, ASECAP (European motorway operators), Member States (Swedish Road Administration and Hungary) and the EC.

The mobility “system” was described as consisting of vehicles, infrastructure (including fuelling) and users. Important issues are safety, security, efficiency and mitigation of environmental impact. It was stated that eSafety has made good progress, particularly in the area of active safety, but also needs to involve co-operative systems; the aim being intelligent users in smart cars on smart roads.

The European Parliament representative said that eSafety work has societal and political importance and provides a good example of integrated policy making.

ACEA wanted progress in the active safety area to be market driven, but said that it is more complicated than passive safety because of additional stakeholders. ACEA stated that vehicles have to be safer and with higher environmental performance but they also have to stay affordable to appeal to the mass market.

ASECAP supported previous statements and are also interested in reducing congestion and driver stress through traffic management and traveller information. Environmental issues were being addressed at the road design stage, in construction and also by better traffic and incident management.

The representative from the Swedish Roads Authority pointed out that 90-95% of accidents involve human error and around 75% are solely the result of human error, so there is a great need for roads to be made more intrinsically safe.

In Hungary consideration is being given to forming a Ministry of Intelligent Infrastructure to bring together traditional provision and ITS, telecommunications and information provision.

eCall was emphasised as a priority by all the speakers. There has been weak progress to date with only 7 Member States and Switzerland having signed a Memorandum of Understanding to promote and develop the system.

Many speakers also noted the importance of stakeholders' engagement and, particularly, raising public awareness of safety and the benefits of new technology. It was suggested that euroNCAP, which has sensitised consumers to passive safety, could be extended to active safety systems. Consumers should also be demanding infrastructure improvements.

3 eSafety and Related Initiatives

The origins and history of the eSafety initiative were presented by Andre Vits (EC). A number of other related activities were also noted:

- eSafety Support is an EC funded project to assist the eSafety initiative by monitoring progress, promoting stakeholder dialogue, and conducting outreach activities, such as organising the eSafety Plenary meetings.
- "i2010: European Information Society 2010 for growth and employment" was adopted by the EC in June 2005 as a comprehensive strategy to promote the digital economy.
- The Intelligent Car Initiative was one of three flagship initiatives under i2010 and was launched in February 2006 as a policy framework to guide and accelerate deployment of intelligent vehicle systems. It is focussing on three areas: eSafety activities, Research and Technology Demonstration and User Awareness.
- As part of the i2010 Intelligent Car Initiative, awareness will be raised by "hands-on" events, TV series and documentaries and through the "eSafety Communications Platform".
- CARS21 is a high-level report on regulation and development of the vehicle industry that has suggested that major TERN infrastructure projects should be pilot areas for intelligent infrastructure and co-operative demonstrations.

Jacob Bangsgaard (eSafety Support) presented a matrix showing implementation of aspects of eSafety by country focussing on: accident data, digital mapping, eCall, fiscal incentives for safety systems, HMI, TMC and user outreach. Those countries identified as more advanced were the Netherlands, Spain, Sweden and Finland, and examples of specific initiatives were given: e.g. Lane Departure Warning (LDW), EVI and "alcohol-locks" in the Netherlands, speed-Alert demonstrations in Spain and Sweden, and eCall in Finland.

Central/Eastern Europe priorities were described as digital mapping, TMC, dangerous goods monitoring, cross-border information exchange and inter-connection of Traffic Information Centres.

4 Working Groups

As at May 2006, there are 11 eSafety Working Groups. Status information (e.g. whether the group is "New", "Active" or "Completed") and results from the individual groups are available on the eSafety Support website (see the bibliography in Section 8 for details). A brief summary of the main issues presented and discussed during the conference is provided below.

4.1 Implementation Road Maps (active)

The Road Map WG has explored both "Business As Usual" and "Supported Implementation" scenarios for the future development of eSafety systems. They have produced both in-vehicle and infrastructure-related recommendations. In the in-vehicle area the recommendations included promoting customer awareness, providing government and insurance incentives and developing sustainable business models; regulation was seen as the last option. In the infrastructure domain the priority systems identified were: eCall,

extended floating car data, RTTI, dynamic traffic management, local danger warnings and speed advice. These all involve EC supported deployment and digital map enhancement.

4.2 Heavy Duty Vehicles (completed)

The WG-HDV has reviewed other WG for their relevance and coverage when applied to heavy-duty vehicles. For this special group, avoiding accidents is much more important than reducing their consequences because of the mass of the vehicles involved when colliding with passenger cars.

It was stated that whilst systems such as fleet management can be advantageous to individual companies, the commercial case for investment in new technology safety systems is less clear and so some special economic treatment is required by the EC or Member States to achieve deployment.

4.3 Accident Causation Analysis (completed)

The Accident Causation WG has identified many accident databases but found that these are differently implemented and analysed. They recommended the collection and representation of local accident data by common standards and the development of a coherent set of parameters for basic accident causation analysis. Work is ongoing within the EC project TRACE which is carrying out research using an integrated approach to safety analysis.

4.4 Human-Machine Interaction (completed)

The WG-HMI completed its work in 2005 with a revised European Statement of Principles (ESoP) and two other documents: Recommendations for Safe Use (RSU) and Implementation Actions. All three will be annexes of an EC Recommendation or Communication that is expected shortly. Following this publication, the WG recommended that both industry and Authorities should promote knowledge and use of the ESoP and RSU and that there should be a particular focus on nomadic devices which may be associated with an increased accident risk.

4.5 Real-Time Traffic and Travel Information (active)

The WG-RTTI has completed its work that was particularly focussed on traffic information data collection and exchange standards, including RDS-TMC. One year ago the group made a number of recommendations to authorities including supporting the TMC-Forum, providing radio spectrum for new services and developing DAB services. Since little progress seems to have been made on implementing the recommendations, the eSafety steering group have asked the WG to investigate barriers to implementation and develop proposals for further actions up to the Autumn of 2007. An open invitation was made for new group participants for these future activities.

4.6 Digital Maps (completed)

The objectives of this group were to define a business model for public-private partnerships to ensure the availability of safety-related attributes within digital maps and to create the necessary public/private co-operation to maintain, certify and distribute those attributes. The safety attributes were identified by the EC "Maps and ADAS" project, e.g. speed limits, and the benefits of various eSafety applications were also identified. One problem is the very many local, regional and national authorities in Europe and different data and quality definitions. Digital map enhancement will be part of several future EC projects.

4.7 eCall (active)

eCall was a particular focus throughout the meeting and was described as having the potential to save 2,500 lives per annum. The MEP Malcolm Harbour in his opening remarks criticised the UK government that had “only now” begun a study on eCall infrastructure.

Since eCall is a development of emergency telephone numbers, a brief status report was provided:

- 112 is available in all Member States but call answering and handling is fully available in only 15; 10 have some deficiencies and infringement procedures will be started by the EC.
- E112 is available in 14 Member States; the other 11 have deficiencies.
- As noted above, 7 Member States have signed the eCall Memorandum of Understanding (MoU) that was released in August 2004 and a further 5 were described as “close to signing”.

Michael Nielson from ERTICO described the eCall architecture, data sets, performance criteria and progress with standardisation (ETSI will discuss this in mid-May). A “toolbox” containing information and documents is available on the eSafety Support website. He also presented the eCall WG deployment plan involving field tests and with a target implementation in 2010.

The most recent EC communication “Bringing eCall to Citizens” in September 2005 called on all Member States to sign the MoU. Since then, the EC have organised expert meetings and meetings with Member States. It is also supporting standardisation and further work on the socio-economic benefit case. Increased media attention is expected following the European Parliament’s adoption of a report by Gary Titley on eCall in April 2006. A further status report will be provided to the European Council in December 2006.

A spokesman from Norway said that their adoption of “vision zero” for accidents is shaping policy including the probable future adoption of eCall. Norway has had inter-Ministry discussions with health, police etc and found that eCall is a complex concept which is difficult to communicate to stakeholders. It also seems to be the case that some Ministries see only the costs to them rather than the national benefits.

A spokesman from Renault pointed out that, whilst manufacturers are keen on the concept of eCall, deployment is unrealistic without a business case, and this is currently lacking.

4.8 International Cooperation (active)

International co-operation with the US and Japan is being pursued through the eSafety International Working Group that meets during ITS World Congresses. It was stated that future meetings will also increasingly involve India and China.

4.9 User Outreach (active)

This WG has investigated ways of improving the demand and take-up of eSafety systems amongst the general public. It has recommended broadening the communications work by the creation of a “communications platform”. This would need a champion and financial support and would involve external communication directed to the general public (media, consumer protection tests with benchmarking, website, fairs) and more targeted communication directed, for instance, to sales staff and driving schools. Clear, simple messages would be required to avoid overloading the consumer with technical details. The WG proposed that Electronic Stability Program (ESP) should be the first example.

4.10 Research and Development (active)

This working group, led by EUCAR, is called “RTD” Research and Technology Demonstrations. It has surveyed R&D activities at regional, national and European level and made recommendations for priority research and demonstrations. The new immediate objective is to assist consensus building in the FP7 programme and will also propose a strategic research agenda for eSafety. The major topics for research will include security, vehicle and co-operative systems, and mobility services for people and goods.

4.11 Communications (active)

This WG was formed in September 2005 to focus on spectrum allocation, standardisation requirements and international co-operation. The most relevant EC projects were identified as COMeSafety, CVIS, Coopers, GST and Safespot. Applications of communications include intersection safety and co-operative driving. The current WG has strong representation from the automotive industry and would welcome involvement from road operators and Authorities.

5 New Activities

Two proposals for new working groups were made.

5.1 Clean Mobility

This new WG is proposed to be chaired jointly by ACEA and ERTICO. The idea is to investigate the potential contributions of information and communication technologies for the reduction of CO₂ and other emissions. It would involve development of educational tools to encourage “Eco-driving” and to transmit data on topography and air quality from the infrastructure to the vehicle in order to influence the vehicle’s power-train, energy management and emission control systems. The group is in its formation stage and is yet to develop its terms of reference and objectives.

There was a brief discussion of whether this proposed WG was relevant within eSafety; also whether it should include adaptation of vehicle speed. There seems to have been an implicit agreement by the eSafety leaders that other applications which are not directly safety-relevant can also be addressed by the group – the idea of this WG is to use eSafety concepts and architecture to address additional mobility challenges.

5.2 Service Oriented Architecture

The motivation for this proposal is to support the move towards co-operative systems allowing loose coupling among interacting software agents by using a small set of simple and ubiquitous interfaces. This would build on material available in the GST project (that is working on architecture) and involve new projects such as CVIS, Safespot and Coopers. It was proposed that the WG should be jointly chaired by a vehicle manufacturer and a road operator and should begin work following the London ITS Congress when full results from GST should be available. Interested stakeholders were invited to contact Michael Nielsen: m.nielsen@mail.ertico.com

6 Other Presentations

6.1 Impact of Driving Technique

There was a short presentation on a case study of fleet drivers' technique and its impact on fuel efficiency and safety. A comparison had been made between drivers without intervention, those with information and those given specific "eco-driver" training and continuous follow-up. It was found that information provided small improvements but training was found to reduce fuel consumption by around 10% and accidents by 80%.

6.2 i2010 Intelligent Car Initiative

As described above, the three activities within the Intelligent Car Initiative (ICI) will be eSafety activities, Research and Technology Demonstration and User Awareness and some further details were given in each of the areas. Within eSafety, the future priorities identified were:

- Incentive schemes
- Spectrum needs
- Promoting the European Code of Practice for ADAS development and deployment
- Extension to clean mobility issues

The R&D priorities identified were:

- Enhanced active safety systems
- Co-operative systems
- "Info-mobility" - information for movement of passengers and goods
- A comprehensive series of Field Operational Tests

For raising awareness, specific actions will include:

- Information to drivers and decision makers to stimulate demand for eSafety products
- A project to benchmark understanding of eSafety systems and concepts
- A project to investigate a performance testing programme for active safety systems
- Future conferences including the i2010 event in Helsinki (27-28 November, 2006)

6.3 Eurobarometer survey on eSafety Systems

Preliminary results were presented from a qualitative study with vehicle owners, fleet managers and other road users to identify how to better communicate and promote vehicle safety technologies. The survey was undertaken for the EC and is expected to be published shortly.

Safety was not found to be an overriding factor in vehicle choice but is expected by drivers within the vehicle package - drivers do not appreciate safety differences between vehicles and do not feel unsafe (or blame other road users for lack of safety). "Active safety" is not well understood.

When asked about specific systems, ABS is relatively well known, although awareness of other eSafety systems is low. Reactions to some concepts when explained was generally positive including ABS, ESP, eCall and Adaptive Headlights, although there was some

misunderstanding of systems' capabilities. Reasonably well received was driver condition monitoring. Less well received were Lane Departure Warning (due to worries of false warnings and of being "bullied" by the system) and Collision Warning (because of concern about loss of control).

Consumers appear to have a whole spectrum of reasons for not buying safety systems: they have concerns about understanding, lack of performance and cost, and think that safety systems should be available to all drivers rather than as options for some.

6.4 Panel "discussion"

The conference closed with brief remarks from representatives as follows:

- Member States (Finland): Urged Member States to support the eCall MoU
- EC: Stated that societal benefits are worth striving for even if there is no apparent business case
- ACEA: Infrastructure elements of eSafety now need a greater focus. User outreach is a key factor.
- Volvo: Noted shift from passive to active safety and stated also that airbags and ABS were introduced without legislation
- Ygomi (a service provider's perspective): The important trends are nomadic devices, mobile communications, data processing capabilities and (maybe) data privacy
- FIA: Also remarked on the focus shift to active safety and supported the importance of communication to stimulate product demand
- ASECAP: Focus on increased motorway monitoring, traffic management and RTTI.

There was no final discussion.

7 Recommendations for the Highways Agency

Clearly there is a lot of activity in the broad area labelled as "eSafety". For the Highways Agency, it would seem relevant to focus particularly on the activities that relate directly to infrastructure and traffic management or that involve road operators through co-operative safety systems.

As well as maintaining an overview of eSafety activities, the Working Groups that appear most relevant are:

- Implementation
- Digital Maps
- RTTI
- eCall
- Service-Oriented Architecture

It is recommended that the report from the Implementation Road Map on priority systems related to infrastructure is studied in detail and related to the HA's own future visions and priorities. The systems identified by the working group include eCall, extended floating car data, RTTI, dynamic traffic management, local danger warnings and speed advice.

An open invitation was made for new participants in the WG-RTTI where the focus is likely to be on data collection (e.g. loop data, probe data from vehicles) as well as data exchange standards. If the HA wanted to become more involved in eSafety, then this Working Group would be a good opportunity.

Digital map data underpins many of the applications of interest to the HA and would be an element of any pilot trials of co-operative systems, but there are a number of difficult issues concerning data access for Local and National Authorities to consider. It is recommended that the HA liaise with DfT on digital map data provision to external mapping suppliers (e.g. over static and dynamic speed limits) and extend its own work on location referencing to study how its static and dynamic geo-referenced data could interface with external mapping systems.

eCall was a particular focus of the meeting because of the high priority accorded to it by the EC and the relatively slow progress in implementation to date. DfT have an on-going study on eCall, from which it is anticipated that a UK national policy will emerge. HA is in discussion with DfT and an HA project will be defined once the outcome of the DfT project is known.

Service Oriented Architectures is another area for potential involvement of the HA, particularly since there appears to be synergies with CVIS architecture work and because involvement of road operators would be especially welcomed. There is also some time available to consider the benefits of involvement since the WG will probably not start its activities until towards the end of 2006.

The Communications Working Group is seeking involvement of more road operators. However at this stage the benefits of HA involvement in the group are not clear. It is recommended that HA EUWATCH should monitor the progress of the group and review the benefits of involvement for the HA as part of this on-going monitoring.

The HA EUWATCH project is available to support the Highways Agency in taking forward these recommendations.

8 Bibliography

a) Working Group presentations

The presentations of the Working Groups made at the conference are available online at:

http://www.esafetysupport.org/en/esafety_activities/esafety_forum/plenary_meetings/5th_esafety_forum_plenary_meeting_2_-_3_may_2006.htm

b) eSafety Compendium

eSafety Support have produced a compendium collecting together a lot of relevant eSafety material. HA EUWATCH has a hard copy of this document. It is also available at:

http://www.esafetysupport.org/download/esafety_forum/5th_Plenary_Meeting/eSafety_Compendium_FINAL.pdf

c) Reports of Working Groups

Final Reports, Interim Reports and available documents for the eSafety Working Groups can also be found on the eSafety Support website:

Concluded Working Groups

Accident Causation Analysis WG final report (officially named "interim report")

http://www.esafetysupport.org/download/working_groups/Interim_report_Nov_2004.doc

Digital Maps WG final report

http://www.esafetysupport.org/download/working_groups/DMWGfinalreport.pdf

Heavy Duty Vehicles WG final report

http://www.esafetysupport.org/download/working_groups/HDV_report_colour.pdf

Human Machine Interaction WG final report

http://www.esafetysupport.org/download/working_groups/HMI_Rec_Final_Report.pdf

Active Working Groups

Communication WG Terms of Reference

http://www.esafetysupport.org/download/working_groups/ToR_WG_Comm.pdf

Implementation Road Maps WG final report

http://www.esafetysupport.org/download/working_groups/Final_Report_181005.pdf

Real-Time Traffic and Travel Information WG final report

http://www.esafetysupport.org/download/working_groups/RTTI/RTTI%20-%20Final%20report%2018%2010%2006.pdf

Research and Development WG progress report

http://www.esafetysupport.org/download/working_groups/RD/Progress%20ReportRTD.pdf

User Outreach WG

Final Report not yet available

eCall - The link to the "toolbox" is:

http://www.esafetysupport.org/en/ecall_toolbox/

9 Glossary

112	A common European emergency number (required by the Universal Service Directive)
ABS	Active Braking System
ADAS	Advanced Driver Assistance Systems
ACEA	European vehicle manufacturers association
ASECAP	European association of motorway operators
CARS21	European report on regulation and development of vehicle industry
CVIS	Cooperative Vehicle Infrastructure Systems
E112	A development of “112” including availability of caller location information
EC	European Commission
eCall	System for automatic notification in the event of a vehicle accident
eSafety	An EC initiative encompassing a range of projects and approaches to provide a forum for a comprehensive and consistent approach to improving safe mobility
ERTICO	European organisation of ITS stakeholders
ESoP	European Statement of Principles comprising HMI design guidelines
ESP	Electronic Stability Program (on a vehicle), also called DSC – Dynamic Stability Control
ETSI	European standardisation organisation responsible for electronic communications
EU	European Union of 25 Member States
EUCAR	European Council of Automotive Research and Development
EuroNCAP	Consumer-oriented vehicle safety rating scheme
EVI	Electronic Vehicle Identification
FIA	European vehicle R&D charity supported by Formula 1 racing
FP7	7 th Framework programme of (future) European research
HDV	Heavy Duty Vehicle
HMI	Human Machine Interface
i2010	European strategy to promote the digital economy
ITS	Intelligent Transport Systems
ICI	Intelligent Car Initiative - one of three flagship initiatives under i2010
MEP	Member of the European Parliament
MoU	Memorandum of Understanding
RSU	Recommendations for Safe Use
RTD	Research and Technology Demonstration
SpeedAlert	Project investigating dynamic speed limiters on vehicles
TRACE	Traffic Accident Causation in Europe: EC-funded research project
TMC	Traffic Message Channel supplying digital traffic messages to vehicles
Vision Zero	A policy objective, originating from Sweden, which aims to develop the road transport system towards the goal of no accidents

WG Working Group (within the eSafety forum initiative)