



eSafety Forum

Summary Report 2003

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eSafety Forum Summary Report 2003

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1. INTRODUCTION

1.1 *About the eSafety Initiative*

Every year 40,000 people die on Europe's roads. During the last decade numerous measures were taken to reduce the number of fatalities on European roads. Nevertheless, from society's point of view the accident costs of road transport are too high with 1.300.000 accidents per year in Europe causing 40.000 fatalities and 1.700.000 injuries, at an estimated cost of 160 Billion €.

The European Road Safety Action Programme published by the Commission provides a general strategy and framework for road safety to reach the ambitious target of halving road fatalities by 2010.

Within this general framework, eSafety is a joint industry-public sector initiative aiming to cut the number of accident by using new Information and Communication Technologies. **Advanced Information and Communication Technologies (ICTs)** can contribute significantly to road safety, enabling sophisticated safety systems which improve road users' chances of avoiding and surviving accidents.

In November 2002 **an eSafety Working Group**, established by the Commission, automotive industry and other stakeholders, proposed 28 recommendations to accelerate the research, development and use of these safety systems in its Final Report.

These recommendations are aimed at the European Commission, the Member States, road and safety authorities, the automotive industry, service providers, user clubs, the insurance industry and other stakeholders. They address the improvement of road safety by integrated safety systems that use advanced ICT for providing new, intelligent solutions which address together the involvement of and interaction between the driver, the vehicle and the road environment.

1.2 *The Commission Communication*

Based on the results of the eSafety Working Group and other consultations, the Commission adopted in September 2003 **a Communication on Information and Communications Technologies for Safe and Intelligent Vehicles**. The Communication brings forward the actions the Commission intends to take in order to accelerate the development, large-scale deployment and use of active safety systems, called the **Intelligent Vehicle Safety Systems**.

The eleven actions of the Communication fall into three categories, namely promoting Intelligent Vehicle Safety Systems, adapting the regulatory and standardisation provisions and finally, removing the societal and business obstacles.

1.3 The eSafety Forum Working Groups

The establishment of **the eSafety Forum** is one of the priority actions announced in the Commission Communication. The eSafety Forum is a joint platform involving all the road safety stakeholders. The general objective of the Forum is to promote and monitor the implementation of the recommendations identified by the eSafety Working Group, and to support the development, deployment and use of intelligent integrated road safety systems.

The eSafety Forum was established by the Commission in close co-operation with the industry, industrial associations and public sector stakeholders early in 2003. The Forum organisation is managed by the Steering Group, which meets about once a month. In 2003, the Steering Group has defined the work programme of the Forum as well as memberships and the Working Groups, but it does not formulate the policy or make decisions for the Forum.

eSafety Forum Steering Group	
ACEA	Ivan Hodac
ERTICO	Olivier Mossé
EC DG INFSO	André Vits (Chair) Juhani Jaaskelainen (Rapporteur)
EC DG ENTR	Neil Bowerman
Road Operators	Jean Mesqui, ASFA
Telecom Operators	Jacques Garcin, Orange World
Equipment Suppliers	Prof. Gert Siegle, Robert Bosch
Automobile Clubs	David Ward, FIA

1.3.1 The Working Groups

The Working Groups are focusing on domain-specific priority areas that are important for the implementation of the eSafety Working Group recommendations, and in line with the actions brought forward in the Commission Communication.

Working Groups	Chair
Accident Causation Data	Michael Hollingsworth, ACEA
eCall Driving Group	Patrice d'Oultremont, Belgacom Wolfgang Reinhardt, ACEA
Human-Machine Interaction	Annie Pauzie, INRETS, FR Alan Stevens, TRL, UK Christhard Gelau, BAST, D
International Co-operation	Martin Rowell, NavTech
Research and Development	Arnold van Zyl, EUCAR
Real-Time Traffic and Travel Information	Prof. Dr. Gert Siegle, Robert Bosch
Road Maps	Risto Kulmala, VTT Hans-Jürgen Mäurer, DEKRA

Accident Causation Data

One of the most important building blocks in setting up a strategy for the deployment of Intelligent Vehicle Safety Systems is the availability of a European wide data of accident causation. While accident statistics for all Member States exist, consolidated accident causation data does not. However, in some countries comprehensive data sets are available and automotive manufacturers and insurance companies have also substantial data sets.

The Accident Causation Data Working Group is analysing the data from the existing EU, Member State and industry road accident databases. In the first phase the Working Group is formulating a methodology and framework which will allow the more effective use of the existing accident causation databases . In the second phase, the Working Group will work analyse more in-depth the user needs on accident causation data from the point of view of being able to evaluate the effectiveness the possible countermeasures, and then make recommendation for further actions needed for effective, homogenous accident causation data collection and analysis. This work is pre-requisite for the work in the other eSafety Forum Working Groups.

eCall Driving Group

Emergency Call (eCall) is a priority both for the industry and the public sector. In cases where a vehicle is involved in an accident, an Emergency Call, or e-Call can be initiated automatically, and accurate vehicle location and additional safety-related information can be passed to the Public Service Answering Point. Such information cuts dramatically down the emergency response times, saving lives and reducing the consequences of serious injuries.

The eCall Driving Group is working on an integrated strategy for Pan-European emergency services. These services will build on the location-enhanced emergency services being implemented in the Member States on the basis of the recently adopted Recommendation on the implementation of E-112. Furthermore, these services will include provisions for more accurate location information and additional safety information.

Human-Machine Interaction

Human-Machine Interaction with increasingly more complex in-vehicle systems is a major concern. To tackle this important issue, the Commission published in year 2000 a Recommendation on Safe and Efficient In-vehicle Information and Communication Systems, which has been welcomed by the industry. The Human-Machine Interaction Working Group is assessing the situation in the light of technical progress in collaboration with the industry and the Member States, and will propose further measures on HMI if necessary.

International Co-operation

International collaboration is seen as an important and essential part of the eSafety initiative and eSafety Forum. It is needed to strengthen the synergies and to avoid duplication with the work which is taking place in other regions, in particular the regions playing a leading role in automotive technology i.e. the North America and Japan.

The International Co-ordination Working Group supports dialogue at the international level, co-ordinates the international aspects of the work of the other eSafety Forum Working Groups and identifies topics/issues where this co-operation is lacking or should be strengthened. The International Co-operation Working Group will make the necessary recommendations to accelerate the exchange of information on priority topics and suggest the way forward. The international co-operation is expected to cover especially Human-Machine Interaction, certification and testing methodology and procedures, harmonisation and standardisation, legal issues, impact and socio-economic benefit analysis and benchmarking/best practise.

Research and Development

The EU's Research Programmes, especially the Telematics Application Programme under the EU's Fourth Framework Programme, and the Information Society Technologies (IST) programme which is part of the Fifth Framework Programme have contributed in realising the leading edge technologies, systems and applications which form the basis for many of the active safety systems which are finding their way to the vehicles today.

The development of the Intelligent Vehicle Safety Systems requires still further RTD in a number of technologies. The critical task is determining the priorities for further research based on analysis of accident causes and the impact of potential countermeasures. Therefore, the focus of the Research and Development Working Group is in actions for determining the priorities for further research. Co-ordinating with the national research programmes and promoting the European Research Area (ERA) is a must, as well as reinforcing the international co-operation.

Real-time Traffic and Travel Information (RTTI)

Real-time traffic and travel information (RTTI) can contribute greatly to safety. In order to facilitate the access to the public sector data, and to enable the private and public sectors to co-operate in the service provision, the Commission published in 2001 a Recommendation on the deployment of Traffic and Travel services in Europe. The Real-time Traffic and Travel Information (RTTI) Working Group provides further analysis and recommendations for accelerating the take-up of the measures for accessing the public sector data, enabling the establishment of public-private partnerships, and the provision of reliable, high-quality RTTI services in Europe.

Road Maps

The market introduction of Intelligent Vehicle Safety Systems involves policy, technological, societal, business, legal and consumer aspects. From the public sector point of view it has to be possible to estimate the market introduction timetable and to use this information to plan for investments and to determine what other measures are required for enabling take-up. The Road Maps Working Group promotes the development of Industry Road Maps, and based on them, elaborates in collaboration with experts from the Member States corresponding Public Sector Road Maps, which predict product development and deployment, and indicate the

investments required for improvements in the road networks and in the information infrastructure.

Business Case

Initially, an eighth Working Group was set up as well, working on the Business Case for Intelligent Vehicle Safety Systems. Due to very close synergies with the eCall Working Group, and the largely overlapping list of members, this group was merged into the Working Group which is now called the eCall Driving Group.

1.3.2 The Plenary Sessions

Two eSafety Forum Plenary Sessions, chaired by the Commission (DG INFSO), were organised in 2003. The main tasks of the eSafety Plenary Sessions are to discuss the selected topics on the basis of the Working Group reports, and to try to conclude with **Forum Recommendations** which present consensus views on the implementation of the action in question.

The Commission **organised the first plenary meeting of the eSafety Forum** in Brussels on April 22, 2003. The Forum brought together 150 representatives of the European automotive and telecommunication industries, providers of intelligent transport systems, infrastructure operators, public authorities and the Commission. Following the lines set out by its four preparatory working groups, the forum adopted recommendations on how to implement eCall (in-vehicle emergency calls), Accident Causation Data, a better Human-Machine Interaction and a stimulating Business rationale. Four new Working Groups were also set up covering International Co-operation, Real-time Traffic and Travel Information, Research and Development priorities and Road Maps.

The 2nd Plenary Session of the eSafety Forum took place in Madrid on November 17, 2003 on the occasion of the 10th Intelligent Transport Systems and Services World Congress. The Forum which featured high-level plenary speakers and a panel discussion discussed the Draft of this Summary Report, and made the **Conclusions which are presented in Annex III.**

1.4 eScope: The eSafety Observatory

The eScope project is a Specific Support Action that supports the eSafety initiative directly by establishing an “eSafety Observatory”. eScope will monitor and stimulate eSafety initiative progress and activities, and will become an easily accessible and up-to-date resource for information on the priority eSafety topics.

eScope comprises three main activities aimed at mobilising the commitment of the eSafety community:

1. Monitoring progress on implementation of the 28 eSafety priority recommendations and of the eSafety “Road Maps” to be agreed
2. Overview of European emerging results on eSafety priority topics

3. Awareness and dissemination.

eScope started 1 January 2004 and will continue to the end of the year 2005. For more information, see www.escope.info

2 Progress Reports of the Working Groups

2.1 Accident Causation Data WG

Chair

Michael Hollingsworth, Director-Transport Policy, ACEA

Objectives

At the first plenary meeting of the eSafety Forum the accident causation analysis working group reported that it had identified four questions. These need answers or recommendations of how the answers can be provided to achieve the consistent accident causation analysis that Europe needs.

What information currently exists?

What can be done with this information in the short term?

What information do we really need?

What can be done in the longer term?

The Working Group has so far concentrated on the first two of these questions and intends to complete answers to all four questions by the end of 2004. The group intends to undertake some basic analysis but considers its primary function is best served by making recommendations about how the necessary work can most effectively be done.

Description

The working group believes that accident causation analysis **requires:**

- diagnosis of the safety issues and identification of the nature and magnitude of the problems at an EU level
- evaluation of the expected effectiveness of countermeasures
- evaluation of the observed effectiveness of the countermeasures.

The contribution of the Working Group to the above three requirements is to provide a way to answer the four questions in the objectives. This should address most of the first requirement and a proportion of the second. It is an essential enabler for the third requirement.

a) Existing Data Sources

The working group has collected information about a sample of twelve databases that already exist in Europe¹.

¹ Data exist outside Europe too but this has not yet been looked at in detail since it is not always completely relevant for European experience.

Many of these data sources are either private or commercial with significant access restrictions brought about by Intellectual Property Right issues. The group sees no prospect of overcoming these restrictions to make disaggregate data publicly available.

Nevertheless, real possibilities exist to share some aggregated data and analyses.

This conclusion has been reached as a result of the following qualitative analysis in which.

i) Aims and objectives have been developed for what available data might provide and what was being sought from them.

ii) Each database has been assessed, on the basis of four criteria to see what are their essential characteristics and to what extent, on a scale of 1 to 5, they have potential to be used in conjunction with other sources. (The results of this analysis are all given in an annex which will be available on the eSafety website).

The analysis confirms the hypothesis reported to the first eSafety Forum that although many information sources already exist they are not enough to provide Europe with the analysis that it needs.

The picture obtained is a mixed one. Some databases are not appropriate for coordinated analysis because they deal mainly with passive safety issues; they were never designed for the purpose of coordinated analysis. Some others show a degree of potential for cooperative analysis and others show good potential.

This mixed canvass indicates to the working group that there is potential for gathering together the various stakeholders who have access to these various databases to seek to share analysis to answer, on a wider basis than is currently possible, a series of agreed questions. Despite some attempts in the past, unfortunately no formal EU multi-stakeholder mechanism currently exists to allow these discussions to take place between the database holders.

To see if an existing activity could be used for this purpose, the working group has invited presentations from groups either running or proposing to run projects in this area. The project presentations were informative and the work being undertaken in the projects is undoubtedly worthwhile. Despite some known proposals, the group does not currently feel that these existing or agreed EU projects will be able to undertake the work being proposed here.

b) Definition of the task

To achieve the task the following steps will be necessary

- Stakeholders need to be clearly identified and brought together;
- Data user requirements need to be identified (governments, road users, manufacturers, suppliers, insurance companies etc);
- Common definitions of accident causation among the stakeholders are required;

- Unambiguous common questions need to be developed (on accident causation);
- the interrogation of data sources can then be undertaken;
- stakeholders can then share and compare analytical results (data and interpretation) and report findings;
- Intellectual Property Right issues will need to be dealt with;

c) Shared Analysis Mechanisms

The variation in the potential of the sample databases for cooperative analysis indicated that the derivation of a more consistent and wider interpretation of the data is not easy. As a result work needs to be done to formulate the appropriate questions, allow the database holders to interrogate their sources and share the results of their analysis. This will take resources and time. In the opinion of the working group **the task is such that it cannot be done on a voluntary basis since the necessary time and resources do not exist.**

The working group is therefore seeking a way to enable this work to be carried out. Possibilities include: Network of Excellence, Integrated Project, SSA (Specific Support Action), CA (Coordination Action) and STREP (Specific Targeted REsearch Project)

Discussion in the group indicates that funding may not be available for such work in the near future. This would constitute a major obstacle.

Recommendations – for short term actions

It is the firm belief of the working group that existing data sources can help to give better EU information on accident causation. This is not a small task and cannot be done on a voluntary basis.

The group recommends:

1. That the definition of the task in section 2b be adopted as a basis for the necessary work.
2. That the task be carried out in the shortest time possible as a matter of urgency
3. That funding be put in place to have the task carried urgently so that final results can be expected within 2 years. This may cost around €1.5 million.

This work is an essential prerequisite measure for other eSafety work or initiatives outside eSafety that are already underway. It has also been identified as a key area of work by the eSafety R and D Working Group.

In the US, NHTSA spends approx. \$28 million annually on accident data (this is ongoing work). The European Union is considerably larger and spends considerably less, often in a fragmentary way.

Impacts

If the above recommendations are acted upon, Europe can within two years use existing data sources to obtain a much clearer understanding of accident causation than exists today. It will

- Establish a European network for accident analysis
- Be complementary to the proposed European Road safety Observatory
- Provide a more scientific basis for the identification and evaluation of effective safety functions
- Enable the confirmation of the relevant best tests and test procedures for safety, performance and ease of use
- Enable the evaluation of effective countermeasures.

Workplan and Longer term initiatives

The work plan of the accident causation analysis working group proposed to concentrate, within the long term context, on the short term priority to make better use of existing data sources in its first year. The Working Group will turn its attention to the longer term actions and needs in early 2004 so that work on these can begin in 2005. These include recommendations for a common European methodology and accident causation information system.

2.2 eCall Driving Group

Co-chairs

Patrice d'Oultremont (Belgacom) and Wolfgang Reinhardt (ACEA)

Objectives

The eCall Driving Group is the successor of the eCall Working Group. The objective of the DG is to enable the complex eCall service chain by removing existing road blocks and coordinating the many action areas. The priority goals are:

- Produce and maintain a stable definition of the eCall concept and a corresponding functional model
- Outline the respective roles of the various constituencies (public services and industries) within that model and ensure that the interfaces between such roles are clearly defined
- Coordinate the outputs of related EU-wide supporting technical activities (e.g. E- MERGE model and ETSI standards)
- Promote a balanced economical model supporting the entire eCall life cycle

Progress report

- The eCall DG has defined the **eCall functional model** and identify the role of the four main constituencies of potential players, that is
 - The car manufacturing industries
 - The mobile telephony industry
 - The public emergency services
 - The private driver assistance and insurance industries

This has been progressed (but not completed yet) through the writing of position papers by the various sector actors. These papers have made it possible to identify –sector by sector - the stable or still-to-be-developed elements of the eCall model.

The eCall DG has addressed the following key issues:

- The considerable diversity of the legal and operational conditions of the public emergency services across the EU. As the central goal of eCall is to reduce the time for these services to reach the site of the crash irrespective of the specifics of the eCalling vehicle and its passengers, it is concluded that a significant degree of **harmonisation of these services is required**, a very tall order indeed.

- Transporting the eCall data and voice signals from the vehicle to the emergency services requires **full interoperability of the three technical platforms involved** (in-vehicle, telecom networks, emergency operation rooms). Although the E 112 EU Directive provides a generic framework for such interoperability, a significant standardisation work still needs to be executed to adapt the terms of the Directive to the specificities of an in-vehicle automated call.
- As time for the emergency services to reach to the crash site is the determining factor in eCall, a **precise positioning** of the vehicle and the **availability of data describing the pre-crash motion** of the vehicle are essential. It is accepted by eCall that the positioning technologies currently (and probably in the future) exploitable by the mobile telephony networks can meet only part of the requirements and that satellite based positioning systems (SBPS) offer significantly better performances. This, in turn raises questions concerning mass access to SBPS and the corresponding in-vehicle equipments. All this parameters will need detailed analysis.
- The **economics of the eCall model have been investigated and found genuinely problematic** in the sense that :
 - Significant up front investments must be made by the automotive industry, the telecom industry and the emergency Authorities
 - When in service, eCall is expected to reduce the costs of the Social Security and the of the insurance Companies while neither of these two constituencies would have contributed to the investments
 - The upfront investments of the automotive and telecom Industries would be largely pointless unless the emergency Authorities, as an initial step, have also invested to make their operational processes compatible with eCall.

The eCall Driving Group has developed several original ideas on how to crack that hard nut. Yet more work is obviously necessary in this essential area.

- A number of private operators have launched commercial eCall-like services that now extend beyond the borders of a single Member State. This eCall DG has therefore identified the possibility that **scenarios where private companies would operate the services in partnership with public emergency Authorities could form the initial kernels of a pan-European eCall service**. This possibility needs to be investigated further.
- A number of **legal issues** have been identified but not treated in any depth yet. Key points are obviously related to privacy, the liability of various players, etc.
- The eCall DG has reviewed and endorsed as compatible with the general eCall functional model **two major outputs of the E-MERGE project** :

- The **minimum set of data** to be provided directly from the vehicle to the relevant emergency Authority
 - The recommended **architecture** for pan-European in-vehicle eCalls.
- Having recognised the absolute necessity that all eCall players agree on a common functional objective and a common project timing, the eCall DG, in collaboration with ERTICO, has drafted an **MoU** to be shortly open for signature. This MoU sets the objectives and outlines the route to complete the launch phase of the eCall project by 2009. It is intended to be the “seed” of a collaborative framework without which the eCall project will be difficult to progress.

Recommendations

As stated here above, and as expressed in the proposed MoU, the possibility to develop eCall hinges around two *sine qua non* key factors:

- Willingness of all parties to **synchronise** their respective efforts
- Agreement on an **economic model** and the corresponding **financial mechanisms**.

To achieve this, it is recommended that the following actions (ranked by their respective priority level) be executed:

- The **Member States agree** to rationalise and align their respective road emergency capabilities
- The **European Commission takes an active role** in encouraging the harmonisation of the operations of the emergency Authorities
- The **vehicle manufacturing Industry** and the **mobile telecom Industry** agree on the necessary standards both in their own area and at the interfaces between their respective areas
- The role of the **public and private insurance services** in the eCall economics are further investigated by the eCall DG
- The **eCall economic scenarios are further elaborated** by the eCall DG and discussed with the European Commission and the Member States.

These tasks should be accomplished by the end of Q2 2004. The current participants to the eCall DG are conscious that their efforts cannot be extended further unless they are backed by the appropriate political will and consensus.

2.3 Human-Machine Interaction WG

Co-chairs

Annie Pauzie (INRETS, F)
Alan Stevens (TRL, UK)
Christhard Gelau (BASt, D)

Background and Objectives

The number and quality of in-car electronic systems / functionality is permanently increasing. This is true for driver infotainment (e.g. Navigation) and driver assistance systems (e.g. ACC). Such systems may provide an increase in traffic safety but also may imply certain risks while driving. This is influenced by good or sub-optimal Human Machine Interface or Human Machine Interaction solutions (HMI). To improve the benefit/risk -ratio the EU has launched in 1999 the so called Statement of Principles for Information and Communication Systems describing basic requirements for in-car infotainment systems. On this background and recent developments within the global discussion the WG HMI was established in February 2003 within the e-safety initiative. This WG will meet at least four times a year.

Following the recommendations of the e Safety Report the WG-HMI will consider amendment and development of the existing EU Statement of Principles (ESoP) taking account of views expressed by Member States and including issues of HMI safety assessment and nomadic devices. Further developments are also tackled by the group and will be addressed during the second working year, taking into account national experiences or company best practices.

Description

The importance of a safe HMI for in-vehicle systems has been stressed many times in resolutions, opinions and conclusions of several European institutions. This was acknowledged by the European Commission (EC) who issued the ESoP on the 21st of December 1999. A voluntary agreement from European car manufacturers to fully respect the ESoP (letter from ACEA), was issued in 2001. This document presents very basic principles for the design of HMI. The ESoP was planned to be a first document to be followed by a more detailed one based on the comments of the Member States. Member States were required to inform the EC, within a period of 12 months from publication of the ESoP of the steps taken by them and by their industries, and should have provided within a period of 24 months evaluation results about the adherence to these principles by industry. Up to now, Germany, Denmark, Great Britain, France and Sweden have sent their reports to the EC. More answers would be welcome. The comments given in these reports are quite varied. All of them recognise interest in the ESoP but also its lack of details.

The approach taken by the WG-HMI can be described as problem-oriented risk/benefit approach to implementation. This approach focuses on assessment methods rather than simplistic "pass/fail" criteria, which are outside the scope of the Working Group. More specifically the WG-HMI will:

1. identify HMI-related matters likely to negatively impact on safety or markets for In-vehicle driver information and assistance systems,
2. explain each problem and reach consensus on the problem definition,
3. identify where there is a consensus over an approach to a solution and where the issue is still "open",
4. develop a focused workplan to resolve issues and solve problems.

Recommendations

Presently specific recommendations must be considered as premature, at least because reports from several Member States are still outstanding and because research is still running. However, what has been done so far by the WG-HMI was to identify and list HMI-related problems from the available Member States reports and other relevant sources independently from the state of the art of present technologies.

This list of HMI-related problems has been clustered around the following six thematic areas:

1. Risks and benefits
2. Users
3. Markets/Implementation
4. Research
5. Nomadic devices
6. Criteria and Verification Procedures on HMI

At the present state-of-affairs these clusters can be considered to be of equal importance. For each of these clusters a "problem statement" has been elaborated, i.e. a general description and discussion of the problem cluster followed by suggestions for routes to solutions. These "problem statements" will be made available as a working document on the WEB site

When a general consensus on the "problem statements" has been reached the WG-HMI will continue with further developing the workplan and proposing in particular amendments and extensions of the ESoP.

Impact

Within the eSafety initiative HMI-related themes have to be considered as cross-sectional issues which tackle all types of in-vehicle systems in a different manner. Generally, the risk/benefit approach to implementation adopted by the Working Group implies the assumption that the provision of more information not necessarily decreases road safety but also has the potential to contribute to

increases in road safety mainly depending on how issues of HMI have been resolved. More is not worse.
This supports the eSafety approach that has both safety and market aspirations.

Workplan for next year

December 2003 - January 2004:

Development of a detailed workplan

February 2004 - January 2005:

Activities contingent on the progress made

Issues of nomadic devices will be tackled

HMI issues related to some ADAS may be addressed if timescale and WG-HMI resources sufficient

Propose amendments and extensions of the ESoP

2.4 International Co-operation WG

Chair

Martin Rowell, NavTech

Objectives

The main objective of this Working Group is to co-ordinate the international aspects of the eSafety Forum and its Working Groups.

To this effect, the International Co-operation Working Group will support the dialogue at the international level between all road safety stakeholders and identify topics/issues where this co-operation is needed or should be strengthened. The International Co-operation Working Group will make the necessary recommendations to accelerate the exchange of information on priority topics and suggest the way forward. The international co-operation is expected to cover especially Accidentology, aspects of Human-Machine Interaction, certification and testing methodology and procedures, harmonisation and standardisation requirements, legal issues and socio-economic benefit analysis and benchmarking/best practise.

Description

International collaboration is seen as an important and essential part of the eSafety initiative and the eSafety Forum. It is needed to strengthen the synergies and to avoid duplication with the work which is taking place in other regions, in particular the regions playing a leading role in automotive technology i.e. North America and Japan.

The first meeting of the eSafety Forum International Co-operation Working Group took place on 17 July 2003 in Paris, under the chairmanship of David Ward (FIA Foundation). Representatives from EU, USA, Japan and Canada were present in this meeting. The main conclusions of this meeting were the following:

1.) There is a need for global co-ordination of the activities in the area of eSafety

The global co-ordination of eSafety, or Global eSafety could be best organised under the umbrella of the regional –operating ITS organisations of the three continents. This co-ordination should be based on the MoUs which exist between the three organisations, and could use the ITS World Congresses as a venue to hold their typically twice-annual meetings.

2.) There is a firm basis for International Co-operation in eSafety

Notwithstanding the above, the meeting established a large number of domains where international co-operation was seen as beneficial and important to all

parties, and where there was willingness for mutual exchange of information and to build a close working relationship.

The meeting examined the 28 European Recommendations of the eSafety Working Group Final Report from November 2002, and identified areas for co-operation (see Table).

	Recommendation	Europe	United States / Canada	Japan	Comments
1-2	<i>Accident Causation Data</i>	Yes	Yes	Yes	See WP29
3-4	<i>Impact Assessment</i>	Yes	Yes	Yes	See WP29
5-6	<i>Human-Machine Interaction</i>	Yes	Yes	Yes	IHRA ITS working group, JAMA and AAA are active
7	<i>Implementation Road Maps</i> a) <i>Industry Road Maps</i> b) <i>The public sector Road Maps</i>	Yes	Yes, ITS plans exist	Can co-operate on R+D Road Maps	
8-9	<i>Intelligent Integrated Road Safety Systems</i>		Yes, a top priority in the US	Yes	
10	<i>Pursue international co-operation in the development of intelligent integrated road safety technologies.</i>	Yes	Yes	Yes	
11	<i>Digital Map Database</i>	Yes	Yes	Yes,	
12-14	<i>Emergency calls and E-112</i>	Yes	Yes, matches E-911	No	
15-17	<i>Real-Time Traffic and Travel Information (TTI)</i>	Yes	Yes to 16	Yes to 16	
18	<i>Regulation</i>	Yes	Yes	Yes	See the WP 29 February 2004 meeting
19	<i>Standardisation and certification</i>	Yes	Yes	Yes	
20	<i>Legal issues of market introduction</i>	Yes	Yes	Yes	
21-22	<i>Ultra-wide band 24 GHz short range radar</i>	Yes	No	No	
23-24	<i>Societal issues</i>	Yes	Yes	Yes	
25-26	<i>The Business Model</i>	Yes	Yes	Yes	
27	<i>User outreach</i>	Yes	Yes	Yes	
28	<i>Creation of eSafety Forum</i>	Yes	Yes, Int-Co-operation WG	Yes, Int Co-operation WG	

Table: eSafety International Co-operation (Europe)

As a next step, this table should be developed into a truly international table, identifying the needs and priorities of the other continents. It could then form the basis of future work.

Recommendations

Due to the late start of the Working Group, the recommendations are related to the continuation of the work (working group mandate and practical organisation).

These recommendations are based on the 1st meeting of the International Co-operation Working Group and the deliberations of the eSafety Forum Steering Committee which discussed the International Co-operation in its meeting on 25 September 2003:

1. International collaboration is seen as an important and essential part of the eSafety initiative and eSafety Forum, and should continue.
2. The International Co-operation Working Group should focus on co-ordinating **the international aspects of the work in the eSafety Forum Working Groups** and identify topics/issues where international co-operation is needed or should be strengthened.
3. The International Co-operation Working Group should make the necessary recommendations to accelerate the exchange of information on priority topics and suggest the way forward.
4. The International Working Group should organise typically 2 meetings per year, each one concentrating on a small number of topics. The topics are selected on the basis of the priorities identified in the first meeting (see table) and further deliberations.
5. Representatives of the eSafety Working Groups on the topics to be discussed are invited to the meetings, together with the international experts (EU-USA-Japan-Canada).

Impact

The problems related to Road Safety are quite similar on all three continents, although some differences are also evident. The problems associated with the development and market introduction of active safety systems are also quite alike. This creates a good basis for international collaboration.

International Co-operation has the potential of avoiding the multiplication of the efforts of both the industry and the public sectors, and avoiding fragmentation of markets through different technical or regulatory approaches. International collaboration should also lead to the proliferation of functionally compatible systems through standardisation, harmonisation and open platforms, thus benefiting the automotive industry, its suppliers and the travelling public at large.

Workplan

The workplan and the dates and venues of the future meetings will be decided in a "Working Meeting" which will be organised in Madrid on 18 November 2003.

2.5 Real-Time Traffic and Traveller Information WG

Chair

Gert Siegle, Prof. Dr., Bosch

RTTI: An important ingredient of eSafety

RTTI (= “Real-time Traffic and Traveller Information”) is the first of a new generation of telematic services for drivers and other travellers to achieve appreciable success. At the time being this is due to the fast-growing implementation of services and products based firstly on existing RDS-TMC broadcast technology. In future supplementary technologies will become applicable, too. By delivering digital traffic messages in real time to a suitable in-vehicle terminal, TMC upgrades static navigation to real-time, i.e. dynamic route guidance, or “electronic traffic avoidance”.

The need now is to bring important safety benefits by alerting drivers to accidents, congestion and hazardous driving conditions. This demands the installation of dynamic traffic information services, extended to urban areas.

Objective of the RTTI Working Group: Make RTTI happen

The RTTI Working Group of the eSafety Forum aims to identify the obstacles to more and Europe-wide RTTI implementation and to identify concrete actions that could remove these obstacles in the specific countries and accelerate deployment.

Challenges

Despite this success, some factors are holding back RTTI from achieving its full market and safety potential:

- In some countries very limited availability of traffic information content
- Limited motivation of some broadcasters to introduce RDS/TMC as programme associated service
- Restricted availability of FM radio broadcast capacity
- Scarce willingness of customers for pay-per-use- service with consequence: Difficulty to achieve successful business model for commercial services
- Need to organise commitment of all links in the service chain
- Technical limitations of TMC technology, need for future standards
- Clear road map for evolution and future development of RTTI products agreed by all partners in the service chain in all European countries.

The mass deployment of RTTI services and products throughout Europe awaits a new level of co-operation between public and private sectors. Traffic data collected by public authorities (e.g. police, highway agencies) in some countries is still not

fully available to commercial service providers; and it is not always “fresh” and sufficiently reliable. While public broadcasters provide full coverage of free TMC broadcasts in some countries, in other countries TMC is not carried on any public network.

Where public services are limited, private businesses may have an incentive to set up commercial services. But building a viable business model is not easy when the service chain has many actors, and end users have a low willingness to pay.

TMC technology today means RTTI is largely limited to inter-urban coverage. But important safety benefits could be realised if urban traffic information services were available, allowing drivers to avoid hazards, incidents and congestion, while the road authority could use RTTI messages to manage traffic flows more safely. EC-funded projects are under way to define adequate protocols to distribute safety-related messages suitable for both urban and inter-urban areas.

Steps towards further RTTI implementation

The RTTI Working Group has identified a number of positive steps to accelerate deployment of RTTI across Europe:

Information content: The fundamental basis for European RTTI services is the collection and processing of real-time traffic data over the entire network, inter-urban and urban. The road authorities and police collect much of this information already for traffic management purposes. An Europe-wide consensus should allow open access to these data, subject to conditions on how it is used at what cost.

Traffic data are also collected by non-public bodies, such as by motoring clubs, broadcasters and service providers. There is a need to explore how to bring this information together into a “data pool” so as to improve both data quality and coverage.

Service coverage and interoperability: RTTI via RDS/TMC in Europe is standardised since years and has a vast coverage and very good acceptance where introduced. But in some countries no broadcasting service or only a patchwork of public and commercial services is available, yet. Up to now, RTTI-Services are limited to regional or national coverage, and roaming across RTTI commercial services is very limited. In some countries, providers even implement services differently, which may then result in proprietary solutions for terminal/car combination.

Broadcast frequencies and capacity: Availability of frequencies and broadcast capacity for digital RTTI services varies strongly across Europe. There is a need for more broadcast capability in some countries (FM or digital (DAB, DRM, or eventually DVB-T, satellite)) to carry more RTTI information destined for in-vehicle receivers. As per today, this could be brought about by public broadcasters, by commercial broadcasters or by a combination of the two.

Technology evolution: Extending RTTI to allow full coverage in urban areas requires new technology, as TMC is limited by its reliance on a defined table of location reference points. This would need to be extended to an on-the-fly method – but that will require substantially more bandwidth to allow adequate location resolution as available e.g. by DigitalRadio (DAB). By consequence, an innovative dynamic navigation even in urban areas will then become possible.

Business models: For both public and commercial services there needs to be a successful business model. As in the past, the public model rests on securing safety benefits judged to outweigh the costs of providing the RTTI service. For any commercial provider, the challenge is to collect sufficient revenue from customers while minimising the cost of data collection and service provision. Individual drivers are reluctant to pay directly for traffic information, especially safety messages that is commonly understood to be provided free of charge as a public service.

The RTTI WG has identified that - beside free services as is TMC in many countries today – annual or monthly fees such as a radio tax or a once-per-life down-payment added to the purchase price of the receivers could be more easily accepted by the customers than a pay-per-use service.

Implementation: There is currently a need to agree within every European country to a strategy and a time schedule for RTTI implementation for urban and interurban services. The TMC Forum fulfils well this need for TMC services and products, but lacks a focus on both safety-related RTTI and urban services. The European assembly of the national transport ministers, the national ministers for transport and their regional counterparts have to take over their role to trigger and to speed-up the installation of the mentioned RTTI services in Europe

A European project can be a good means for bringing stakeholders together in a common endeavour and for finding consensus on a technical solution, but should be complemented by a process to secure high-level backing and commitment for implementation across Europe.

Recommendations for action

To advance the resolution of these issues and the implementation of RTTI across Europe, the Working Group recommends the following steps:

- Secure a Europe-wide agreement on access to traffic information content
- Identify and begin steps towards the organisation and execution of the pooling of diverse sources of real-time traffic information
- Identify the obstacles to pan-European service coverage, roaming and interoperability and establish a process to work to a solution
- Analyse status of RTTI and digital broadcast implementation across Europe and develop options for achieving a dedicated RTTI broadcast capability
- Identify and support standardisation needed for delivery of enhanced safety-related RTTI services
- If possible, find some viable business models for commercial and mixed service provision

- Develop medium and long-term strategy and road-map for RTTI deployment and secure high-level commitment to its realisation

The RTTI Working Group proposes to start implementing these recommendations through a European project involving the participation of key stakeholders.

2.6 Research and Technology Development WG

Chair

Chair: Arnold van Zyl – European Council for Automotive R&D

Objectives

To identify and map the Regional, National and European research, technology and demonstration projects that may contribute to addressing the recommendations of the High Level Group on eSafety.

To establish mechanisms for monitoring, aligning and steering such projects so as to maximize synergies and disseminate results.

To identify the priorities for research areas for integrative European research, technology and demonstration projects in the field of eSafety.

Description

Approach:

- In an intensive consultation process the members contributed to mapping of current RTD activities² at the Regional, National and European level. A matrix was generated in which the content of the known projects were projected onto the following categories:

Enablers

Accident Causation
Road Infrastructure and Architecture
Telecommunications Infrastructure
Vehicle Architecture
Human Factors

Safety Functions

Preventive and Protective Systems
Post Accident Call

Cost Benefit Analysis

- On the basis of this analysis, the RTD gaps were identified and recommendations for future research priorities were derived.

² Information on the projects analysed were contributed by the WG members and by a literature survey. No claims are made with respect to the completeness of the analysis and the results represent a first qualitative indication of the distribution and focus of R&D activities in Europe.

Recommendations

The analysis of around 70 projects in the broader area of eSafety indicated the following major focus in the chosen categories:

Category	"Major focus in % for ca 70 projects"
Enablers	
Accident Causation	2
Road and Telecommunications Infrastructure and Architecture	12
Human Factors	19
Safety Functions	
Vehicle Architecture	58
Preventive and Protective Systems	
Post Accident Call	2
Cost Benefit Analysis	6

General Observations

More than half of R&D efforts analysed focus on electronic systems and enabling technologies for accident prevention and protection systems within vehicles.

From the analysis it emerges clearly that the present European "eSafety research activities" do not reflect the necessary systems approach.

Research activities in accident causation, road and telecommunications infrastructures; post accident call and issues around cost benefit analysis and efficacy of safety measures need more R&D investment.

European research activities should be structured to be complementary to activities in other regions. (USA and Japan)

The analysis needs to be refined in 2004 by adding additional projects to the matrix which may have been overseen.

Specific Recommendations

Further research efforts in the field of eSafety should focus on the following areas:

Accident Causation (ca 2% of R&D focus)

- Greater emphasis and funding of accident causation R&D including the analysis of present data and demographic aspects.

Post Accident Call (ca 2% of R&D focus)

- Further R&D into the required technical architecture and structure of eCall systems
- Study aspects of civil protection and emergency management

Cost Benefit Analysis - Quantification of Impacts (ca 6% of R&D focus)

- EU wide assessment and verification (with international comparison) of efficacy of safety measures and systems – including the establishment of methodologies for a comprehensive cost benefit analysis.

Road and Telecommunications Infrastructure and Architecture (ca 12 % of R&D focus)

Road Infrastructure:

- Study possibilities of infrastructure to vehicle communication
- Investigate how new vehicle technologies could influence design of roads (or could even be used for road infrastructure)
- Develop HMI standards for information on road infrastructure
- Stronger involvement of road authorities and road operators in R&D project

Telecommunication Infrastructure:

- Assessment of how Galileo, UMTS and other electronics systems could improve preventive safety technologies

Human Factors (ca 19 % of R&D focus)

Normal driving:

- Investigate aspects of collective/interactive road use
- Improve common understanding of road traffic
- Improve understanding of error compensation mechanisms

HMI:

- Investigate adaptation of driver behaviour to new technological systems
- Investigate acceptability of technologies (definition of acceptability / criteria of acceptance)

Vehicle - Preventive and Protective Systems (ca 58 % of R&D focus)

Vehicle Architecture:

- Investigate and suggest appropriate protocols for vehicle to vehicle & vehicle to infrastructure. Ensure EMC compatibility of communication components.
- Investigate structure of a common vehicle architecture that would allow the implementation of vehicle and infrastructure specific safety features.

Vehicle Technology:

- Investigate interaction of vehicle infrastructure systems
- Investigate efficacy vs. market penetration and life cycle aspects
- Continual improvements on component level – reliability and cost

Impact

The RTD WG could provide the stimulus for the enhancement of a systems approach in safety RTD through continued analysis and monitoring of the international R&D landscape.

2.7 Road Maps WG

Co-chairs

Risto Kulmala, VTT and Hans Jürgen Mäurer, DEKRA

Objectives

The main objective of the working group is to develop regularly reviewed road maps with technical steps and socio-economic implications for the introduction of Intelligent Integrated Road Safety Systems as well as to develop public sector road maps indicating the required improvements and related potential of public and private investments in the road and information infrastructures.

The working group started on 16 June 2003

The work schedule is projected to the 1st QR 2005.

Description

There is a high potential for safer road traffic in future, supported by intelligent integrated vehicle systems and appropriate infrastructure improvements. The whole market deployment is affected by different high complex aspects like technological, social, business, financial, legal and consumer aspects. A balance between the automotive industry, the consumer demand, standardisation and road authorities is needed.

Within the first 3 meetings the WG found the following approach feasible for solving the target :

- Create Inventory of relevant eSafety systems taken into account new systems and projects (RTD)
- Analyses of vehicle fleet changes over the years up to 2010
- Analyses of current safety situation and prognosis (Accident causation data)
- Estimate safety benefits of different systems
- Point requirement of systems to road and information infrastructure
- Identify realistic Scenarios for Implementation models
- Agree on the systems as well as the related road and information infrastructure to be implemented by 2010
- Develop roadmaps to be reviewed periodically

The first steps are in progress.

For each relevant eSafety system the following facts are to be considered:

- Accident fatalities to be affected (Accident causation data)
- Expected change in fatalities
- Other benefit / side effects

- Approximation for In Vehicle cost average
- Approximation for cost of road and information / Infrastructure
- Technical capability
- Regulatory issues (obstacles and updated regulations needed)
- Estimation for implementation issues / different classes of vehicles
- Fleet composition in market up to 2010

These items are combined into a **eSafety MATRIX**, which combines all relevant information to enable evaluation of the realistic impact of eSafety systems.

The group is working in close liaison with the car industry through ACEA and with the road authorities through CEDR (Conference of European Road Directors) Telematic group.

After the first discussions within two meetings, the following structure for those systems was found:

The list below is so far not finalised and will be the basis for the ongoing process of further work

Autonomous vehicle systems with safety implications	Autonomous vehicle systems with network potential	Driver information systems based on v2v or v2i / i2v communications	Systems with support /communication from/to infrastructure
Dynamic control systems	Obstacle & Collision Warning	High quality Congestion / Traffic Information	e-call
Run flat Indicator	Local Danger Warning	Inter vehicle hazard warning	Speed Alert
Tire Pressure Monitoring System	Adaptive Brake Lights		Variable Message / Traffic Signs
Vision enhancement	Urban Drive Assistant		Infrastructure Based Warning Systems
Blind spot monitoring	Extended environmental information		Lane Keeping Assistant
Adaptive Head Lights			Lane Departure Warning
Automatic Headlight Activation			
Driver Condition Monitoring (Alcohol lock, etc.)			
Traffic Sign Recognition and alert			
/Event data recorder/			

Recommendations

Due to the late start of Road Map working group, there are no agreed recommendations available, but the approach for solving the main objectives are clear. One of the most important issue is data gathering from other working groups for solving most of the questions which come up very soon.

Impact

Based on results of Road Maps, all parties can think about the business case as well as the public sector budget implications for implementing different eSafety systems.

Chances and obstacles will be clearly identified for all involved parties and options for enhancement of the process can be found.

It is recognisable that some new technology, like 24GHz Sensors, are getting in conflict with existing and regulated frameworks. So such conflicts will be pointed out and considered and action plans established

ACEA, private agencies and Road Authorities are the key actors for convincing the customer with added values

ANNEX I: Members of the eSafety Forum Working Groups

Accident Causation Data WG

Mr Hollingsworth	ACEA
Mr Page	LAB
Mr Mc Carthy	AIT/FIA
Mr von Jan	Volkswagen
Mr Kocherscheidt	BMW
Mr Stanzel	Volkswagen
Mr Ljung	Chalmers University
Mr Chapelon	Ministry of Transport, France
Mr de la Bourdonnaye	Ministry of Transport, France
Mr Bidaud	ASF

Mr Fay	Ford
Mr Sferco	Ford
Mr Niewöhner	DEKRA
Mr Loccufier	Ministry of Transport, Belgium
Mr Barbas	EC
Mr Avedal	Volvo
Mr Gallianos	ACEM
Mr Perlot	FEMA
Mr Hermitte	CESAR

eCall Driving Group

Patrice d'Oultremont	BELGACOM
Wolfgang Reinhardt	ACEA
Adam Mc Carthy	FIA
Alfred R. Krappel	Motorola (ACES) Group
Anders Holmsten	SOS Alarm – Sweden
André Vits	EC, DG INFSO
Annie Pauzie	INRETS
Bernard Cousyn	PSA
Bernd Wiege	T-Mobile
Bernhard Dicke	VDA
Bodo Fiebig	T-Mobile
Bram Hansma	Bosch
Charles Capelleman	Arc Assistance
Charlotta Ostberg	Volvo Car Corporation
Christophe Guillaneuf	FIGIEFA/CLEDIPA
David Heath	Ofitel
Davila Gonzalez Emilio	EC, DG INFSO
Didier Paris	Ministère de l'Intérieur
Dietmar Flügel	ADAC
Dietmar Schmitz	T-Mobile
Fabrizio Minarini	EC, DG INFSO
Ghassan Freij	ERTICO
Giorgio Audisio	FIAT
Graeme Smith	FEI Information Technology
Hubert Rechsteiner	Signant
Ivan Hodac	ACEA
Jacques Amselem	Mondial Assistance
Jacques Garcin	Orange

Jan Malenstein	KLPD
Jean Mesqui	ASFA
Jean-Yves Bronner	Siemens VDO
Joachim Scholten	BMW
John Archer	Ford
Josef Heimann	Signant
Juhani Jaaskelainen	EC, DG INFSO
Jürgen Wojatschek	Daimler Chrysler AG
Kalistratos Dionelis	ASECAP
Karel Buckholczer	FOCWA
Suleyman Bagislatici	FOCWA
Keith Keen	EC, DG INFSO
Kenji Nishikawa	Toyota
Kevin Oord	Vodafone Passo
Laurence Havaux	FIGIEFA/CLEDIPA
Leo Koolen	EC, DG INFSO
Marcel Van Empel	Bosch
Martin Hill	UK
Mats Örbloom	Volvo
Maurizio Rotondo	AISCAT
Michael Niedenthal	VDA
Michael Nielsen	ERTICO
Michel Fond	Orange
Mike Hollingsworth	ACEA
Pere Sauret	RACC
Ralf-Roland Schmidt-Cotta	Siemens VDO
Robert Ledger	Norwich Union
Roland Niggstich	Germany Ministry

Stephen Clark	Thales
Sylvia Gotzen	FIGIEFA/CLEDIPA
Theo Kamalski	Siemens VDO
Thierry Delire	TOURING

Thomas Buttersack	Volkswagen AG
Tony Harcombe-Smee	FMC
Xavier Castells	RACC
Yann Bouler	Renault

Human-Machine Interaction WG

Annie Pauzie	INRETS (F)
Alan Stevens	TRL (UK)
Christhard Gelau	Bast (Ge)
Daniel Augello	Renault (F)
Stefan Becker	Ford (Ge)
Lutz Eckstein	Daimler-Chrysler (Ge)
Michel Fond	Orange France
Sylvia Gotzen	FIGIEFA (Belgium)
Christophe Guillaneuf	FIGIEFA (France)
Valérie Moutal	EC DG INFSO
Paul Piamonte	Volvo Technology

	Corporation (Sweden)
Lennart Palmqvist	Volvo Technology Corporation (Sweden)
Martin Rowell	Navtech (Netherlands)
Vincent Godec	Navtech (Netherlands)
Jean-Pierre Cheynet	UTAC (France)
Angelos Bekiaris	CERTH – HIT (Greece)
Joachim Scholten	BMW (Germany)
Bernard Favre	Renault VI (France)
Oliver Carsten	Leeds University (UK)

International Co-operation WG

Martin Rowell	NavTech
Josef Haberl	BMW AG Munich
Volker Knapp	ADAC
Wolfgang Reinhardt	ACEA
Gerd Fritsch	Siemens VDO Automotive AG
Bernard Gauvin	French Transport Ministry
Eric Sampson	Department for Transport, UK
André Vits	EC, DG INFSO
Juhani Jaaskelainen	EC, DG INFSO
David Acton	General Motors

Russell Shields	Ygomi LLC
Ian Noy	Transport Canada
Yoshikazu Noguchi	Toyota Motor Corporation
Masaaki Suga	ITS Japan
Juan Ramos-Garcia	UNECE Transport Division Geneva
Louis Sylvain Ayral	CLEPA
Olivier Mossé	ERTICO
David Ward	FIA Foundation

Real-Time Traffic and Traveller Information WG

Siegle, Gert	Bosch/BMS
Abraham, Denis	TDF
Bastiaansen, Ad	TeleAtlas
Bidaud, Claude	Autoroute du Sud
Beier, Wolfgang	DC/TollCollect
Cobopoulos, Yannis	Omnis-ellas S.A.
De Wijs, Cees	Fa.Logica
Feindt, Uwe	ERTICO
Fond, Michel	Orange
Freij, Ghassan	ERTICO
Hartwig, Katrin	ERTICO
Jaaskelainen, Juhani	EC, DG INFSO
Kamalski, Theo	VDOSiemens

Klijnhout, J.J.	Rijkswaterstaat
Kompfner, Paul	ERTICO
Kusche, Thomas	WDR
Lux, Bernhardt	Mycontent Company
Major, Marcel	RTBF
Niggstich, Roland	BMVBW
Potters, Paul	Mobi-Spot
Rudoph, Axel	T-System
Sarignac, Alain	Renault
Schade, Hans-Joachim	Siemens
Scholten, Joachim	BMW
Vits, André	EU, DG INFSO
Wevers, Kees	NavTech

Research and Technology Development WG

Arnold van Zyl	EUCAR
Giancarlo Alessandretti	CRF
Franck Batocchi	PSA
Achim Boeckelt	BMW
Paola Carrea	CRF
Armel de la Bourdonnaye	French Ministry Of Public Works
Johan Engström	VOLVO
Ivan Fencl	TRC
Richard Frampton	Loughborough University
Brendan Halleman	ERF

Richard Harris	Knowles House
Peter Joerg Heinzelmann	BMBF
Steffen Isensee	BMBF
Yves Page	LAB
Steve Phillips	FEHRL
Farida Saad	INRETS
Matthias Schulze	DC
Pete Thomas	Loughborough University
Berthold Ulmer	DC
Bart Van Areem	TNO

Road Maps WG

Hans-Jürgen Mäurer	DEKRA
Risto Kulmala	VTT
Franck Batocchi	PSA
Yann Bouler	Renault
Giorgio Audisio	Fiat
Claudio Bergese	Fiat/KGR
Lars Lind	Ford/Volvo
Jörg Breuer	Daimler-Chrysler
Klaus Wüst	Daimler-Chrysler
Lutz Eckstein	Daimler-Chrysler
Christian von Glasner	Daimler-Chrysler
Wolfgang A. Reinhardt	ACEA
Arnold van Zyl	ACEA
Bernhard Labudek	ADAC
Joachim Scholten	BMW
Roland Niggestich	BMVBW
Adam McCarthy	AIT + FIA
Fritz Bolte	BAST
Gerard Gastaut	France
Cathy Jenkins	UK DfT
Juhani Jääskeläinen	EC DG-INFSO
Ghassan Freij	ERTICO
Paul Kompfner	ERTICO

ANNEX II: Terms of Reference of the Working Groups

1. Context

1.1 In 2001, the European Commission together with the automotive industry and other stakeholders established an eSafety Working Group consisting of some 40 experts, and mandated it to propose a European strategy for accelerating the research and development, deployment and use of Intelligent Integrated Road Safety Systems including Advanced Driver Assistance Systems (ADAS). In November 2001, the Working Group published its Final Report, which was later approved in a High-Level Meeting by all stakeholders to be the basis for further actions in advancing the use of ICT for improving road safety in Europe. The report gives 28 detailed recommendations for action, directed to the European Commission, the Member States, road and safety authorities, automotive industry, service providers, user clubs, insurance industry and other stakeholders.

1.2 One of the key recommendations in the report is the proposal to establish an **eSafety Forum** to act as a joint platform for all road safety stakeholders. The objective of the Forum is to promote and monitor the implementation of the recommendations identified by the eSafety Working Group, and to support the development, deployment and use of Intelligent Integrated Road Safety Systems. The Forum is expected to provide for a platform to encourage and monitor the actions of all stakeholders, including the Commission, industry and the Member States.

1.3 The eSafety Forum was established by the Commission (DG Information Society) in close collaboration with the industry, industrial associations and public sector stakeholders. A **Steering Group** has been set up, and it has defined the Forum Workprogramme for 2003, as well as the membership and Working Group structure. Furthermore, **the Commission Communication** on eSafety includes, as one of its priority measures, continuing support for the Forum³.

2. Constitution

2.1 In the context of the setting-up of the Forum, **four Working Groups** will be set up immediately, and four others later in 2003.

2.2 Depending on the Forum progress and priorities, the Steering Group may propose to the eSafety Forum plenary the establishment of additional Working Groups, which can be also ad-hoc groups with a specific objective and limited duration.

2.3 The Working Groups will be established initially **for the period of 2 years** (2003-2004). The Working Groups are expected to meet at least four times per year.

³ Commission Communication: Information and Communications technologies for Safe and Intelligent Vehicles, COM 2003(542) Final, 15.9.2003

2.4 The Working Groups will be chaired by industrial partners or industry associations. The chairs are expected to set up the meetings and provide for their secretariat. The Commission will provide help if so requested by the chairs (providing meeting facilities, mailings, copying etc).

2.5 The following Working Groups will be constituted in 2003:

Working Groups	Working Group topic	Chair
1 st half 2003	Emergency call (e-Call) ⁴	ERTICO/Belgacom
	Accident Causation Data	ACEA
	Human-Machine Interaction	INRETS/TRL/BAST
	Business Rationale ⁵	Norwich Union

Working Groups	Working Group topic	Chair
2 nd half 2003	Road Maps	DEKRA/VTT
	International co-operation	NavTech
	Traffic and Travel Information (TTI)	Bosch
	Research and Development (RTD)	EUCAR

3. Membership

3.1 The Working Groups will be set up by the selected chairs, who will invite at their discretion the relevant experts to participate in the groups. The number of participants will be kept relatively low, to allow for efficient working in the group.

3.2 The Working Groups will, however, assure that all relevant players are represented. In this respect, the Working Group participation should reflect that of the eSafety Forum.

3.3 All Working Group participants are expected to share the general objectives of the eSafety Forum, and to be willing to actively contribute to its work.

3.4 Participation from Member States will be encouraged. These members (from Road and Highway authorities, transport ministries, safety organisations) will be invited as individual experts and not as formal representatives of their countries.

4. Objectives and Scope

4.1 The Working Groups will **contribute to the general objectives** of the eSafety Forum in their domain, and base their work on the Recommendations of the eSafety Working Group.

⁴ This working group has changed its name to eCall Driving Group

⁵ This working group was merged into the eCall Driving Group

4.2 The Working Groups will identify and focus on the issues which are important for the implementation of the Working Group recommendations (including technical and market issues, regulation, standardisation, societal issues etc). If necessary, they will address also issues not covered by the eSafety Working Group recommendations, if deemed necessary for the work.

4.3 The Working Groups **will aim at reaching consensus amongst the players on the critical issues, and to conclude in specific, detailed recommendations** on the implementation steps which lead into the accelerated development, deployment and use of Intelligent Integrated Road Safety Systems.

4.4 The Working Groups will also provide recommendations on setting up of the monitoring mechanisms for the progress in their domain.

5. Reporting

5.1 The Working Groups will provide regular reports on their progress and present results at the eSafety Forum Plenary Meetings⁶. All reports are considered to be public, if not explicitly stated otherwise by the Group chairman.

5.2 The Working Group Chair and its members may be invited to present the Group's progress, reports and recommendations in other public meetings, workshops and conferences.

5.3 The Commission may use the Working Group results in its internal reporting and the eventual reports to the Council and the Parliament.

6. Costs

6.1 Working Group chairs and members are responsible for their own costs including travel costs and meeting expenses.

6.2 On the specific request of the chairs, meetings can be organised in Brussels in the Commission premises, without charge. The travel costs for a small number of experts (non-industrial partners) per meeting can be reimbursed on request.

⁶ Meetings 2003: 7 April and 17 November

ANNEX III: Conclusions of the 2nd eSafety Forum Plenary Session Madrid, 17 November 2003

1. Good progress in all the seven industry-led eSafety Forum Working Groups, with the first concrete results emerging (eCall)
2. Commission Communication "ICT for Safe and Intelligent Vehicles" adopted on 15 September 2003 seen as an important milestone
3. Industry emphasizing the need for integrated approach, affordability, standardization and harmonizing of legal requirements
4. In-vehicle Emergency Call (eCall) remains number one priority for both industry and the public sector
 - Agreement to use E-112 as per Commission recommendations
 - Architecture, messages and routing defined
 - Working on an economic model and a MoU
5. Accident Causation Analysis needs urgent short-term actions and a long-term strategy
 - On short-term, useful databases exists but additional funding needed (1,5 M€)
 - Work to be continued for defining long-term data needs and strategy
6. Focus in the Real-Time Traffic and Travel Information is in making it happen at the European level - also in the cities
 - On a short-term, building on the RDS/TMC services
 - Innovative public-private business model required
 - An European project is needed to secure access to public data and to develop European-wide services
7. Human-Machine Interaction presents a very complex problem for the introduction of in-vehicle systems, including nomadic devices
 - HMI-related problems defined on the basis of the Member States' reports
 - Targeting amendment of the European Statement of Principles, and other measures if necessary
8. Survey of ongoing RTD projects reveals lack of systems approach and confirms need for further work
 - More than half of RTD efforts focus on the vehicle, with substantial gaps in funding of other areas
 - Further analysis of the around 70 projects required
 - Moving towards recommendations for the focus of further RTD and analysis of impacts/benefits

9. International Co-operation seen as an essential part of the eSafety initiative
 - First analysis shows similar interest profiles in EU, USA and Japan
 - Moving towards concrete co-operation in the selected priority topics

10. Agreement on implementation Road Maps seen essential for the public sector investments and for user awareness
 - Inventory of relevant eSafety systems which will reach the market by 2010 created (eSafety Matrix)
 - Closely linked to other Working Groups (e.g. RTD, eCall, RTTI)
 - Next: Analyzing the cost/benefit and to work out realistic implementation scenarios for eSafety Systems