eSafety Contributing to road safety in Europe

European Commission
Directorate General Information Society and Media
ICT for Transport

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The Political Framework
  • i2010
  • Road Safety

The eSafety Initiative
  • The eSafety Forum and its Working Groups
  • The 2nd eSafety Communication:
    Bringing eCall to Citizens

Moving Towards Co-operative Systems

Next Steps

Conclusions
The political framework

Lisbon 2000

“EU: Largest knowledge-based economy by 2010”

- R&D Policy
  European Research Area, Eureka, COST, nat’l R&D programmes

- Deployment & promotion
  Broadband access, e-business, e-government, security, e-health, ...

- Legal & Reg. Policy
  Entrepreneurship, benchmarking (innovation scoreboard), R&D investment 3% of GDP by 2010, industrial policy, CARS-21 ...

- towards a ‘single market for research’
- towards ‘online Europe’
A European Information Society for growth and employment

i2010 is a joint effort of the EC, Member States and economic actors aiming to accelerate the take-up of knowledge society in Europe.

It proposes three principal lines for action:

- **A single European information space**
  Will provide mobile access to new content and introduce new advanced services.

- **Strengthening innovation and investment in ICT Research**
  The automotive sector will benefit from bigger investment in RTD.

- **Achieving an inclusive European Information Society**
  ICT offers tools to further improve safety, efficiency and sustainability of the European transport systems.

The i2010 communication launches a flagship initiative in the area of safe and clean transport, focusing on **INTELLIGENT CAR**.
The objective is to improve the quality of the living environment by supporting ICT solutions for **safer, smarter and cleaner mobility of people and good**.

In this context, the Commission proposes to launch a “quality of life” flagship ICT initiative on …

**Smarter**
- Intelligent communication and interaction with other Vehicles and with the Transport infrastructure to improve efficiency and safety.

**Safer**
- Active ICT-based safety systems and devices helping to prevent and mitigate the impact of accidents and to provide better rescue.

**Cleaner**
- Improve traffic management through intelligent driver assistance systems (including Real-Time Traffic and Travel Information (RTTI) and multi-modality), thus contributing to reduction of polluting emissions.

… addressing environmental and safety issues arising from increased road use.
The Political Framework: Road Safety

• The White Paper on European Transport Policy

• Road Safety Action Programme
  – Adopted in 2003
  – Halving the number of fatalities in Europe
  – Mid-Term Review in September 2005: Stock-taking, further measures

• The eSafety Initiative
  – The eSafety Forum and its Working Groups
  – 2nd eSafety Communication in September 2005
The eSafety Initiative was launched in 2002 as a joint initiative of the European Commission, industry and other stakeholders.

It aims at accelerating the development, deployment and use of Intelligent Integrated Safety Systems that use Information and Communication Technologies (ITC) in intelligent solutions, in order to increase road safety and reduce the number of accidents on Europe's roads.
Steering Committee
Chairs: A. Vits – EC
       O. Mossé – ERTICO
       I. Hodac - ACEA

Plenary Sessions
HL Meetings

eSCOPE

eCall
Driving Group
Chairs: M. Nielsen – ERTICO
       W. Reinhardt – ACEA

Real-Time Traffic and Travel Information WG
Chair: Prof. G. Siegle – BOSCH

Research and Technological Development WG
Chair: A. Van Zyl – ACEA

Human Machine Interaction WG
Chairs: A. Stevens – TRL
       C. Gelau – BAST
       A. Pauzie – INRETS

Accident Causation Analysis WG
Chair: M. Hollingsworth – ACEA

Implementa tion Road Map WG
Chairs: H-J Mäurer – DEKRA
       Prof. R. Kulmala – VTT

User Outreach WG
Chair: J. Grill – AIT/FIA

International Cooperation WG
Chair: O. Mossé – ERTICO
Support: M. Rowell

Heavy-Duty Vehicles WG
Chair: J. Trost – DaimlerChrysler

Digital Maps WG
Chairs: A. Bastiaansen – TeleAtlas
       Y. Moissidis – Navteq

Communications WG
Chair: Uwe Daniel, Bosch

Active
Completed
New
Bringing eCall to Citizens

- Adopted on 14 September, 2005
- eCall: A key recommendation of the 1st eSafety Communication
- Significant progress towards the full-scale roll-out of eCall
- But: Roll-out can be delayed if the national and regional governments do not invest in the necessary infrastructure for eCall
The pan-European eCall (1): WHY?

• Builds on 112 and E112
• Reduction of average response time to the accident:
  ✓ 50% in Rural Areas
  ✓ 40% in Urban Areas
• Reduction of accidents severity
  ✓ 15% to less severe medical category
• Annual lives saving
  ✓ Estimated to be up to 2,500 in EU 25
• Costs savings
  (exceed many times needed investments)
  ✓ ~ 26 billion Euro in EU 25 annually
The pan-European eCall (2): HOW?
eCall (3): Plan to succes

Low cost in-vehicle eCall functionality as standard option
Common specifications and reference design
Shared costs and benefits

Mandate: Functional and Operational Model agreed
12/2004

All key Stakeholders (incl. MoU) to sign
12/2005

Business Model and rollout plan:
06/2006

Reference IVS/PSAP network system specification
-07/2007

Start development
-12/2007

Roll-out infrastructure key markets: Field Test with early Adopters

Finalize European Infrastructure:
09/2009

- Rollout In-vehicle eCall functionality as standard option

Public-Private Partnership of all stakeholders
Compatible European Service Infrastructure
Full coverage of key Member States
Financial incentives for ramp-up
1. The Member States should sign the eCall MoU
   – Lack of signatures threatens to delay the eCall implementation and weakens the commitment of industry

2. The Member States should promote 112 and E112
   – The Member States should promote the use of 112 and take steps for accelerating the introduction of location information in their public wireless networks

3. The Member States should upgrade their PSAPs to handle location-enhanced E112 calls and eCalls
   – The infrastructure at PSAPs should be in place at the latest at the end of 2007

4. The Member States should provide adequate location-enhanced emergency services and language support
   – For maximum benefit, the whole emergency chain should be upgraded
Moving Towards Co-operative Systems

A vision for the future: basic functions defined, but technology not available

Improving traffic systems efficiency:
Traffic management: data – information - guidance

Deepening of the topics
Basic inputs to Standardisation (GDT, ATT Alert…)

Moving to Field trials

IST 7th FP

IST 6th FP

IST 5th FP

TAP 4th FP

DRIVE 2

DRIVE 1

Prometheus (EUREKA)
PReVENT will develop, test and evaluate safety related applications, using advanced sensor and communication devices integrated into on-board systems for driver assistance.

- 52 partners
  - Industry
  - Public Authorities
  - Research Institutes
- 1/2/04 4 years
- Cost 55M€
- EU funding 30 M€
The 6th FP: Call 1 projects (2)

**Goal:** open and standardised framework architecture enabling end-to-end in-vehicle telematics services

- March ’04 – 3 years.
- 21, 5 M€
- EU: 11 M€.
- 49 partners

![Diagram of telematics framework architecture](www.gstproject.org)

**Technological Subprojects:**
- Open Systems
- Certification
- Security
- Service Payment

**Safety Services Subprojects:**
- Rescue
- Enhanced Floating Car Data
- Safety Channel

[www.gstproject.org](http://www.gstproject.org)
The 6th FP Call 4: Co-operative Systems

Co-operative Systems will enhance the support available to drivers and other road users.

They will provide for significant improvements:

– Greater transport **efficiency**
  - Making better use of the capacity of the available infrastructure
  - Managing varying demands

– Increased **safety and comfort**
  - Improving the quality and reliability of information used by advanced driver assistance systems
  - Allowing the implementation of advanced safety applications
Co-operative systems and in vehicle integrated safety systems

(3 IPs + 13 STREPs)
- Architectures, technologies and harmonisation of Co-operative systems
- Towards autonomous vehicle-based systems
- Accurate localisation and dynamic traffic maps
- Next generation information and communication technologies of co-operative systems

In support of the eSafety Initiative
- Accident causation analysis (1 STREP)
- Socio-economic analysis of impact of stand alone and co-operative intelligent vehicle systems (1 STREP)
- Actions in support of the eSafety Forum (2 SSAs)

International Co-operation, dissemination, SME measures, training of professionals
- EU-India international co-operation actions (1 SSA)
- Training (1 SSA)

Proposals retained 22
Grant 91.7 M€
Distribution 57 / 43%
New / old instruments
The Focus in the eSafety Initiative will remain in Deployment:

– High-Level Meeting with the Member States on eCall and Implementation Road Maps - 18 October 2005
– Updated European Statement of Principles (HMI) – December 2005
– Launch of the eSafety Communications Platform – January 2006
– Launch of FP6 projects on Co-operative Systems – January 2006
– Launch of the i2010 Intelligent Car Flagship - 2006
FP7: Building the Europe of Knowledge
Theme 2 – Information and Communications Technologies - ICT meeting societal challenges for mobility:

- Integrated ICT-based in vehicle safety systems based on open, secure and dependable architecture and interfaces
- Interoperable cooperative traffic management and safety systems
- Personalised, location-aware info-mobility services, including navigation

Status of preparations

- Framework Programme and Specific programmes currently being finalised
- Go ahead when there is a decision on Financial Perspectives
- Under Discussion: Joint (European) Technology Initiatives
Conclusions

A large number of Intelligent Vehicle Safety Systems and Technologies exist or are being developed. But the clear challenge is in deployment:

– The take-up of new safety systems has been slow
– A large number of safety technologies are under development
– The Commission is supporting “smarter vehicles” through eSafety, i2010 and RTD funding
– Focus of the eSafety initiative: Deployment, including business models and user awareness
– Next: Co-operative Systems with new levels of safety and efficiency and i2010 Intelligent Car
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www.cordis.lu/ist/so/esafety/home.html

eScope website
www.eScope.info
Thank you!