Harmonised and interoperable EU-wide eCall

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European Commission - DG INFSO G4
ICT for transport
**eCall: What is it?**

- Triggered automatically by the in-vehicle device in case of serious accident or manually by vehicle occupants
- **Builds on the single European Emergency number (112 and E112)**
- Creates a voice link to the most appropriate PSAP and sends data message (Minimum Set of Data – MSD-)

**MSD includes:**
- Time stamp
- Accurate location (GNSS) and direction of driving
- Vehicle identification (VIN)
- Vehicle propulsion type
- Number of passenger (if available)
The potential benefits of eCall

- Reduction of average response time to the accident:
  - 50% in Rural Areas
  - 40% in Urban Areas
- Annual reduction of accidents severity
  - 200,000 to less severe medical category
- Annual lives saving
  - Estimated to be up to 1,000 in EU 25
- Costs savings (largely exceeding needed investments)
  - Up to 38 billion Euro in EU 25 annually
eCall - Political support

**ITS Directive 2010/40/EU**

- **European Commission:**
  - Part of the Road Safety Action Programme 2011-2020
  - COM (2009) 434: “eCall: time for deployment”

- **European Parliament:**
  - Titley report 2005/2211
  - Gurmai report 2007/2259

- **Member States and stakeholders**
  - MoU
  - EeIP
Signed by **21 Member States** and 4 Associated States

- More countries have announced their signature
- Commitment from the automotive and telecom industry
- ~100 other organisations have signed as well, representing all the stakeholders involved

**Aims at parallel commitment of all stakeholders towards full eCall Deployment**
The European eCall Implementation Platform

- Coordination body bringing together relevant stakeholders representatives
- **National Platforms + Associations** (ACEA-KAMA-JAMA, ERTICO, GSM Europe, ASECAP, FIA, CEA, eSafetyAware,...)

- Ensure harmonised deployment in Europe => guidelines and recommendations, exchange best practices
- 6th meeting: 24 March ‘11
- Next meeting: October ‘11
User acceptance

- 2006 Eurobarometer study
- + 25,000 interviews
- Over 70% of the respondents in the EU - 25 want to have eCall in their next car.

**eCall Public Consultation**
(Jul-Sep 2010)

eCall should not be optional, but mandatory in all vehicles

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<th>Agree</th>
<th>Undecided</th>
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<td>32.5%</td>
<td>12.2%</td>
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![Bar chart showing user acceptance of eCall](chart.png)
History of the eCall initiative

**Institutions**
- European Commission
- European Parliament
- ESOs

**Working groups**
- eSafety WG
- eCall Driving Group

**Stakeholders**
- Vehicle Manufacturers
- Telecom
- PSAPs
- Insurances/SPs
- Member States

**RTD/Studies/Pilots**
- eSafety COM
- 1st eSafety COM
- 2nd eSafety COM
- 3rd eSafety COM
- Letter to ETSI
- Report on the Road Safety AP
- Interim on the RS AP
- Titley Report
- In-band modem
- CEN KoM
- ETSI KoM
- eCall Driving Group
- eCall Service Providers Group

**Timeline**
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010

**Additional Notes**
- eCall Comm.
- Proposed Dir. on ITS
- Intelligent Car report
- ITS Action Plan
- eCall Impact
- eCall Comm.
PSAPs: Needs of infrastructure upgrading

- **112 (Obligation under USD)**
  - Appropriate answer (including multilingual)
- **From 112 to E112 (Obligation under USD)**
  - Equipment: GIS (Geographic Information System) in every operator post
  - SW for processing location data
  - Procedures: Location data should arrive to the same operator answering the voice call
  - Interface with MNO: Agreement on protocols for provision of best location
  - Training
- **From E112 to eCall (In-band modem solution)**
  - Server with in-band modem to receive the MSD
  - SW for processing the MSD
  - Procedures to deal with eCalls
  - Training
The Emergency Response Services will benefit from:

- Immediate contact with the vehicle occupants through the voice link
- Detailed information on the incident with the MSD allowing:
  - Immediate localisation of the incident (no language issue)
  - Reduction of the conversation time
  - Quick dispatching of the relevant emergency service(s) optimising the response to the emergency
eCall Standards: status

- Public service 112-based only
- Voice + MSD to relevant PSAP
- 112-based, with or without intermediation platform under Public delegation

Succesfully Balloted

prEN 16072
Pan-European eCall Operating Requirements (112-only)

Succesfully Balloted

High Level Application Protocols

prEN 16062

ETS1 TS 122 101
Voice + MSD on 112

In-band modem trx

“eCall Data Transfer - General Description

“eCall Data Transfer. ANSI-C Reference Code

Data registry procedures - ISO/EN 24978:2009

ETSI TS 124 008
Table 10.5.135d

eCall Flag

ETSI TS & TR 126 969
“eCall Data Transfer. Characterisation Report

EN 15722
MSD

ETSI-MGS & 3GPP. Chair: E. Barck

CEN TC 278 WG 15. Chair Bob Williams

Voice + MSD to relevant PSAP

Voice + MSD to relevant PSAP

Voice + MSD to relevant PSAP

Voice + MSD to relevant PSAP
The eCall Impact Assessment

EC position
2009: “eCall: time for Deployment”

The IA is an aid to political decision-making, not a substitute for it.

Private led eCall
Voluntary approach

Voluntary
approach

Option 3
Regulatory Measures

Common Specs (+ implementation plan) - PSAPs
ITS Directive

MNOs
MV Type approval
regulatory framework – IVS

IA
ITS Directive 2010/40/EU
eCall priority

**Art. 3: Priority actions:** “the harmonised provision for an interoperable EU-wide eCall”

**ANNEX I:** The definition of the necessary measures for the harmonised provision of an interoperable EU-wide eCall, including:

- the availability of the required in-vehicle ITS data to be exchanged;

- the availability of the necessary equipment in the emergency call response centres receiving the data emitted from the vehicles;

- the facilitation of the electronic data exchange between the vehicles and the emergency call response centres.
The definition of the necessary measures for the harmonised provision of an interoperable EU-wide eCall, including:

- the availability of the required in-vehicle ITS data to be exchanged;
- the availability of the necessary equipment in the emergency call response centres receiving the data emitted from the vehicles;
- the facilitation of the electronic data exchange between the vehicles and the emergency call response centres.

In-vehicle Part

- Proposal for regulation under the vehicle type-approval legislation
- CEN Standards
The definition of the necessary measures for the harmonised provision of an interoperable EU-wide eCall, including:

- the availability of the required in-vehicle ITS data to be exchanged;
- the availability of the necessary equipment in the emergency call response centres receiving the data emitted from the vehicles;
- the facilitation of the electronic data exchange between the vehicles and the emergency call response centres.

PSAPs Part

- Upgrading of the PSAP infrastructure in the framework of the Directive 2010/40/EU on the deployment of ITS in Europe
- Common specs to be adopted by end 2012. CEN & ETSI standards

– the availability of the necessary equipment in the emergency call response centres receiving the data emitted from the vehicles;

– the facilitation of the electronic data exchange between the vehicles and the emergency call response centres.
The definition of the necessary measures for the harmonised provision of an interoperable EU-wide eCall, including:

- the availability of the required in-vehicle ITS data to be exchanged;
- the availability of the necessary equipment in the emergency call response centres receiving the data emitted from the vehicles;
- the facilitation of the electronic data exchange between the vehicles and the emergency call response centres.

1. Based on the USD

2. Recommendation to the MS targeting MNOs on the transmission of eCall

    - Support of the eCall like any 112 call
    - Implementation of the eCall discriminator (ETSI standards)

Telecom Part

Annex I ITS Directive

eCall priority
Option 3: Envisaged regulatory measures


- CEN Standards are available

Recommendation to MS targeting MNOs
- Support of the eCall like any 112 call
- Implementation of the eCall discriminator (ETSI standards)

Based on the USD
- Upgrading of the PSAP infrastructure in the framework of the ITS Directive
- Common specs to be adopted by end 2012.
1: In-vehicle system

- eCall in the WP 2011 of MVWG
- 1Q 2011: Start of drafting
- 3Q 2011: Consultation with experts and stakeholders
- 1Q 2012: Adoption of Proposal by EC
- 2Q 2012: Co-decision (EP and Council)
- 3Q 2013: Adoption & Publication
- 4Q 2013: Drafting Implementing Regulation
- 4Q 2014: Adoption Implementing Regulation
2. Communication

• To Member States, targeting Mobile Network Operators

• Main contents:
  – MS should indicate MNOs where to route the eCalls
  – MNOs should handle eCalls like 112 calls
  – MNOs should implement eCall flag in their network

• Expected adoption: 2Q 2011

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Disclaimer: "The following roadmaps are indicative and based on estimations. They have neither been adopted nor approved by the European Commission, therefore they cannot be regarded as official programme of the Commission"
HeERO includes *nine national Pilots* in the following EU Member and Associated States:

- Italy
- Romania
- Greece
- Finland
- Sweden
- Czech Republic
- Germany
- Netherlands
- Croatia

HeERO also includes a *multi-country pilot*, and an *international pilot* involving three EU and associated countries with Russia ERA GLONASS system.

**Project Coordinator:** ERTICO  
**Project duration:** 1 January 2011 – 31 December 2013  
**Consortium:** 40 partners + 9 EU Member and Associated States  
**EC contribution:** 5.000.000 euro  
**Total budget:** 10.254.803
Objective: Prepare for the deployment of the necessary infrastructure in Europe for making the interoperable Pan-European in-vehicle emergency call service eCall a reality for all European citizens. HeERO will carry out pre-deployment pilots on eCall.

Specific project objectives are:

- Define **operational and functional requirements** needed to upgrade eCall related service-chain parts to handle eCall
- Implement and **test** available Pan-European eCall related **standards**
- Implement and test needed technical and operational infrastructure upgrades
- Identify possible use of eCall system for **value-added services**
- Produce the **training material** for the eCall operators
- Assess **certification procedures** related to the eCall services equipment
- Produce **recommendations** for future eCall deployment in Europe
- Promote pilots results and **best practices** with other Member and Associated States non directly involved in the project
- Demonstrate **interoperability** and continuity the EU-wide eCall service
• Open to any interested eCall stakeholders.

• « log-in access » in the website to:
  
  ➢ Find pilot results and other key information of pre-deployment activities
  ➢ Find contact details of participating partners
  ➢ Find Helpdesk open to questions on the pilots
  ➢ Find detailed description of pilots sites
  ➢ Contact the different pilot sites in case they want to use the infrastructure for test purposes

www.heero-pilot.eu
Thank you for your attention

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