

eCall – saving lives through in-vehicle communication technology



eCall, an electronic safety system that automatically calls emergency services in the case of a serious car accident, is ready to be deployed across Europe. Even if you are unconscious, the system will inform rescue workers of the crash site's exact location, and the ambulance will be on its way within minutes. eCall will save lives and reduce the severity of injuries.

The technical development of eCall is completed. The Commission is reinforcing efforts to speed up the deployment of this life-saving technology, with the aim of having a fully functional EU-wide service in place by 2015. Parallel action of Member States, car manufacturers, telecom operators and emergency centres is now needed to ensure that this system will seamlessly function throughout Europe by this time.

Cars that 'dial' 112

As soon as the eCall device in your car senses a severe impact in an accident, it will automatically call the nearest emergency centre and transmits the exact geographic location of the accident scene and other data. eCalls can also be made manually, at the push of a button, by witnesses to an accident for example.

Whether the call is made manually or automatically, there will always be a voice connection between the vehicle and the emergency call centre in addition to the automatic data link. This way, any car occupant capable of answering questions can provide the call centre with additional details of the accident.

Road carnage – how eCall can help

Action to reduce death figures and injuries on Europe's roads is urgently needed! In 2010, about 31,000 people were killed and 1.5 million injured in about 1.15 million traffic accidents on the EU's road network alone.

Getting an immediate alert in the event of an accident and knowing the exact location of the crash site will cut emergency services' response time by 50% in rural and 40% in urban areas. Thanks to this gain in time, eCall is expected to save hundreds of lives in the European Union each year, and to mitigate the severity of tens of thousands of injuries. Furthermore, all injured will be treated faster, thereby giving accident victims better recovery prospects. Quicker arrival at the accident scene will also allow faster clearance of crash sites, thus reducing the risk of secondary accidents, decreasing congestion times, cutting fuel waste and lowering CO₂ emissions.

In hard financial terms, the EU's economic loss, caused by road accidents, amounts to more than €130 billion per year. If all cars were equipped with the eCall system, several billion Euro could be saved every year.

The single European emergency number 112, E112 and eCall

In the event of an emergency, the single European emergency number 112 can be called free of charge from any fixed-line or mobile phone all over the European Union. 112 calls are given the same service level as calls to alternative national emergency numbers. Staff at the emergency centres should speak several languages.

E112 is a version of 112 that is enhanced by location data. The telecom companies know the geographic origin of the call and transmit this information to the emergency centre which, in turn, must be adequately equipped to process it. E112 is a logical development of 112. Whenever you are unable to describe where you are, it is helpful that the emergency call centre gets this piece of information automatically. This holds in particular in an emergency. The centre can then respond much faster.

eCall builds on E112. Emergency centres must be capable of processing E112 calls. They must also be able to deal with the minimum set of data, which eCall transmits automatically. In addition to the coordinates of the crash site, this set contains the vehicle's type and model (e.g. family van or two-seater – a detail having a big impact on the potential number of injured people), the direction of travel (important e.g. for accidents on motorways) and more data relevant for the rescue services.

Rolling out eCall: the challenges

Despite these tangible benefits from a technology that is ready to roll, eCall has still some way to go before being installed and functioning throughout the EU. This is mainly because of the need for parallel action from a range of different parties involved in the value chain:

- Firstly, all new cars leaving the assembly lines will have to be equipped with eCall devices complying with common European standards (as already approved by CEN and ETSI).
- Secondly, telecom operators must ensure that the mobile networks are capable of identifying the 112 eCalls. The minimum set of accident data must be transmitted as quickly as possible from the crashed vehicle to the emergency call centre.
- Thirdly, emergency centres and rescue services must be equipped for processing the minimum set of data transmitted by the eCall. They should also be equipped to forward all information to the ambulance, police, fire brigade, hospital etc. Unfortunately, not all emergency call centres in all EU member states are yet able to support these functionalities.

The European eCall Implementation Platform (EeIP)

The European eCall Implementation Platform (EeIP) brings together experts from Member States and relevant stakeholders (automotive manufacturers, telecom operators, suppliers, automobile associations, and road operators) to simultaneously work on the missing parts in the value chain. The platform guides, coordinates and monitors the progress of the implementation of the eCall service across Europe. It guarantees the timely, effective and harmonized deployment of the service.

Pre-deployment Pilot Projects: HeERO

The Commission co-funds pre-deployment pilot projects in nine European countries. In the framework of project 'HeERO' they are upgrading their emergency response infrastructure to test and ensure the interoperability and efficiency of the eCall service across borders.

Broad support for eCall!

At present, 22 EU Member States have formally declared their support for the timely deployment of a pan-European eCall: Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. Bulgaria

and Poland have started the internal procedures that precede signing. Ireland has in writing expressed support for eCall's mandatory introduction. Formal commitment to eCall also comes from Croatia, Iceland, Norway and Switzerland. For different reasons, France and the United Kingdom are still reluctant to support eCall. The UK's hesitation is based on cost-related questions.

Additional to government support, there are now more than 100 official commitments to eCall from industry, road safety organisations and other interested stakeholders (see www.ec.europa.eu/ecall for the complete list of signatories).

On numerous occasions, the European Parliament has given its full support to the deployment of eCall. In a broad-based opinion poll, the majority of European citizens expressed the wish to have eCall in their next car.

Next Steps for Deployment

The deployment of the eCall service in Europe is a priority both in the Commission's ITS Action Plan and the Directive on the deployment of Intelligent Transport Systems (ITS).

The Commission has therefore reinforced its efforts to speed up eCall deployment and is helping with additional measures, including:

- support for the European eCall Implementation Platform (EeIP),
- and awareness-raising and educational activities for consumers, drivers and car dealers.

The Commission is also proposing regulatory measures targeted at different actors, namely

- the automotive industry: to mandate the introduction of an affordable eCall system in all new vehicles;
- the telecom operators: to transmit the eCall and its Minimum Set of Data without delay from the crashed vehicle to the emergency call centre (Finished. Please see EC Recommendation C(2011) 6269 final of 8 September 2011);
- the Member States: to upgrade their emergency call centres for the efficient processing of eCalls.

Further Information

- **The eCall web page:**
www.ec.europa.eu/ecall
- **iCar support's website:**
www.icarsupport.eu
- **Europe's Information Society Thematic Portal:**
www.ec.europa.eu/information_society