

eCall – saving lives through in-vehicle communication technology



In the near future, your car will have an electronic safety system that can automatically call emergency services if you have an accident. Even if you are unconscious, the system informs rescue workers of your exact whereabouts, and the ambulance and the fire brigade will be on their way in minutes. This system will work anywhere in Europe, even if you cannot speak the local language. All this thanks to "eCall", a system now being rolled out across the European Union.

Cars that 'dial' 112

When the eCall device in your car senses a major impact in an accident, it automatically calls the nearest emergency centre and transmits the exact geographical location of the accident. Calls can also be made manually, at the push of a button, if someone is still conscious in the crashed car.

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

Road carnage – how eCall can help

Action to reduce deaths and injuries on Europe's roads is urgently needed! Around 39,000 people are killed and 1.7 million injured annually in about 1.2 million traffic accidents on roads in the European Union.

In hard financial terms, the economic loss caused by road accidents amounts to more than €160 billion per year. If all cars were equipped with the eCall system, up to €26 billion could be saved annually.

Knowing the exact location of the crash site, emergency services' response time will be cut by 50% in rural and 40% in urban areas. Due to this gain of time, eCall is expected to save up to 2,500 lives in the European Union each year, and to mitigate the severity of tens of thousands of injuries. eCall will also allow faster treatment of injured people, so that accident victims have better recovery prospects. Arriving at the accident scene sooner will also allow faster clearance of crash sites, reducing the risk of secondary accidents, as well as congestion times and CO₂ emissions.

The single European emergency number 112, E112 and eCall

The single European emergency number 112 can be called free of charge from fixed line or mobile phones all over the European Union in the event of an emergency. 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 location-enhanced version of 112, crucial for mobile calls including eCalls. The telecoms operator transmits the location information of a caller to the emergency centre which in return must be adequately equipped to process this data. E112 is a logical development of 112. When you are abroad, it is hard to know exactly where you are, especially in an emergency. If the emergency centre can know it for you, it can respond much faster.

eCall builds on E112. Emergency centres and emergency service chains must be capable of dealing with calls coming from an in-vehicle eCall device. They must also be able to process the minimum set of data, including location data, which is automatically transmitted in the eCall, even when voice communication is not possible.

Rolling out eCall

Despite these clear benefits from a technology that is ready to roll, eCall has some distance to go before being installed and functioning throughout Europe:

- Firstly, all new cars will have to be equipped with eCall devices. In 2005, the European Commission and the automotive industry agreed to schedule full-scale roll-out of eCall for 2009. eCall devices were to be available as an option for all new cars from September 2009.
- Secondly, the single European emergency number 112 and its location-enhanced version, E112, (see box overleaf) must be operational for both fixed and mobile calls throughout the European Union. Unfortunately, not all EU countries are yet able to support all functionalities of this service. At present, E112 is not working properly in some EU countries for calls made from mobile phones.
- Thirdly, emergency centres and all rescue services must be capable of processing the accident location data transmitted by eCall. For example, call centre operators need to be equipped to receive and process these data. They should be able to forward all information to the fire brigade, ambulances, police, hospitals etc.

“Bringing eCall to citizens”

Emergency centres and rescue services fall under the responsibility of national, regional or local governments, or appointed agencies. Action within EU countries is therefore essential to prepare and equip emergency services for the implementation of eCall.

In 2005, with the aim of “bringing eCall to citizens”, the Commission urged EU countries to take the following measures:

- formally commit to the implementation of a functioning eCall system throughout the European Union;
- widely promote the single European emergency number 112;
- upgrade emergency centres to enable them to handle E112 calls, and thus eCalls;
- modernize their entire emergency chains and instruct rescue personnel for the demands of the new system.

Some EU countries have taken the lead, but others are lagging behind in their support to eCall deployment, and the target roll-out date of 2009 was missed.

Because of these delays, the automotive industry decided in 2006 to postpone the optional fitting of eCall devices in all new cars.

Bringing eCall back on track

"eCall" is one of the most important road safety actions under the European Union's "eSafety" initiative. eSafety seeks to improve road safety by fitting "intelligent" safety systems based on advanced electronic technologies into road vehicles.

The Commission reinforced its efforts to keep eCall on track, with an action plan identifying measures crucial for making eCall a reality.

For its part, the Commission vowed to work on privacy and standardisation issues, and assist in field tests and public awareness campaigns.

Recent progress: time for deployment

The formal commitment to eCall was first signed by seven Member States: Finland, Sweden, Cyprus, Greece, Italy, Lithuania and Slovenia. In 2007, six more put their signatures to the deal: Austria, the Czech Republic, Germany, the Netherlands, Portugal and Spain. Slovakia followed in 2008 and Estonia in 2009. Commitment to eCall also came from Switzerland, Iceland and Norway. Other Member States have expressed their willingness to sign: Belgium, Bulgaria, Hungary, Luxembourg, Romania and Poland. There are now more than 80 official commitments to eCall, including industry and other organisations.

The European Parliament fully supports the deployment of eCall and the majority of citizens want to have eCall in their next car.

The technology and common European standards needed for the deployment of the pan-European eCall are ready. However some Member States are still not responding to eCall, mainly due to cost concerns.

The Commission is proposing additional actions: support to the European eCall Implementation Platform (group of experts from Member States who deal with practical implementation of the deployment of eCall), awareness and education actions, and launching of eCall pre-deployment pilots. If by the end of 2009 significant progress is not achieved, the Commission could propose regulatory measures to mandate the introduction of an affordable eCall system in all new vehicles.

Further Information

- **Europa Information Society Portal: eSafety Home Page:**
<http://ec.europa.eu/esafety>
- **eSafety support:**
<http://www.esafetysupport.org>
- **Europe's Information Society Thematic Portal:**
http://ec.europa.eu/information_society/