

Intelligent transport systems - eCall - Operating requirements for third party support

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Intelligent transport systems - eCall - Operating requirements for third party support

Systèmes de transport intelligents - eCall - Exigences opérationnelles des services eCall de fournisseurs privés

Intelligente Verkehrssysteme - Notruf - Betriebsanforderungen für die Notruf-Unterstützung durch Dritte

This European Standard was approved by CEN on 22 October 2011.

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Foreword

This document (EN 16102:2011) has been prepared by Technical Committee CEN/TC "Road transport and traffic telematics", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2012, and conflicting national standards shall be withdrawn at the latest by June 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The scale of death and injury on roads in Europe needs to be fully comprehended to understand the need for an automated method to alert about accidents. In 2008, there were 38 900 fatalities in the EU-27. The figure for 2009 is around 34 500 fatalities. The trend for 2001 to 2008 is around a 5 % annual reduction. Road accident injuries are in the region of 1,7 million (2008). An automated method of accident notification has been estimated to have the potential to save up to 2 500 fatalities annually in the EU-27 when fully deployed, and reduce the severity of injuries in order to bring significant savings to society in terms of reduced costs and human suffering.

Emergency calls made from vehicles can assist with the objectives of significantly reducing road deaths and injuries, but drivers often have poor (imprecise) location awareness, especially on interurban roads or abroad. Additionally, in many situations, the car occupants may not be in a position to call using a normal mobile phone.

The situation is worse for those travelling abroad: a high (and increasing) number of vehicles travelling outside their home country and this is therefore also contributing to the need for an automated emergency call system in vehicles. In the EU there are over 100 million trips to another EU country per year (EU-15). 65 % of people feel less protected while abroad and most do not know which number to call in an emergency (in some countries over 60 %). Language problems are pertinent and may render communication difficult.

In the most crucial cases, the victim(s) may not be able to call because they have been injured and/or trapped, do not know the local number to call, and in many cases, particularly in rural situations and late at night, there may be no witnesses who happen to have a mobile phone or a sense of community.

The objective of implementing an in-vehicle emergency call system is to automate the notification of a traffic accident. One major benefit is to transmit *data* from the vehicle.

There are two means to provide an *eCall* from a vehicle:

- One method is to use the *pan-European eCall*, which sends the voice call and the *data* directly to the PSAP, using the emergency number 112.
- Another method consists of using a 'third party services supported eCall', referred to as *TPS-eCall* in this document. This is an *eCall* variant which includes the transmission of *data* to a Third Party Service Provider or TPSP, and the establishment of a voice call with this TPSP. In the case of an emergency likely to require assistance from the emergency services, the TPSP establishes a voice connection with the *most appropriate PSAP*. The TPSP also forwards all relevant information concerning the event, including the information specified as mandatory by the MSD standard (EN 15722) as a minimum, to the *most appropriate PSAP*. The TPSP also provides voice communication between the PSAP and the *vehicle occupants* by setting up a conference call for example, if this is required by any of the parties involved and allowed by the PSAP.

This European Standard specifies the generic operational requirements for the *TPS-eCall*.

1 Scope

The objective of implementing a 'Third Party' emergency call is to provide emergency assistance and an automated notification of a traffic accident, using 'Third Party Services' packages where such services are supported between the vehicle and a Third Party Service Provider in countries where such notification of an emergency are supported by PSAPs.

The first objective of this *TPS-eCall* is to transfer an emergency message from a vehicle to a Third Party Service Provider (TPSP) in the event of a crash or an emergency, and to establish a voice channel between the in-vehicle equipment and the TPSP.

The second objective of this *TPS-eCall* is, in case of an emergency likely to require assistance from the emergency services, for the TPSP to transfer an emergency message including the *data* of the *Minimum Set of Data* (MSD) (as defined in EN 15722) from the TPSP to the *most appropriate PSAP* and to make best efforts to establish a direct voice contact between that PSAP and the occupants of the vehicle if required by the PSAP.

This European Standard specifies the general operating requirements and intrinsic procedures for an in-vehicle *eCall* via the services of a Third Party Service Provider (TPSP).

This European Standard also provides definition of the service(s) provided to the PSAP and the method and form of service delivery.

NOTE An important part of the *TPS-eCall* is the *Minimum Set of Data* (MSD). The operating requirements for the MSD are determined in this European Standard, but the form and *data* content of the MSD is not defined herein. The common European MSD for *eCall* is determined in EN 15722. Additional *data concepts* may also be transferred, and it is recommended that any such *data* concepts be registered using a *data registry* as defined in EN ISO 24978 to ensure that they can be understood by the recipient.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15722:2011, *Intelligent transport systems — eSafety — eCall minimum set of data (MSD)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

- 3.1**
112
single European emergency call number
- 3.2**
data
representations of static or dynamic objects in a formalized manner suitable for communication, interpretation, or processing by humans or by machines
- 3.3**
data concept
any of a group of data structures (i.e. object class, property, value domain, *data elements*, message, interface dialogue, *association*) referring to abstractions or things in the natural world that can be identified with explicit boundaries and meaning and whose properties and behaviour all follow the same rules