

Intelligent transport systems - ESafety - Pan-European
eCall operating requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16072:2022 sisaldab Euroopa standardi EN 16072:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 16072:2022 consists of the English text of the European standard EN 16072:2022.
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English Version

Intelligent transport systems - ESafety - Pan-European eCall operating requirements

Systèmes de transport intelligents - eSafety - Exigences
opérationnelles du service eCall paneuropéen

Intelligente Verkehrssysteme - eSicherheit -
Betriebsanforderungen für den gesamteuropäischen
eCall

This European Standard was approved by CEN on 24 July 2022.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 16072:2022) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, 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of an identical text or by endorsement, at the latest by March 2023, and conflicting national standards shall be withdrawn at the latest by March 2023.

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

This document supersedes EN 16072:2015.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association.

The following revisions have been introduced:

- Subclause 7.7.3 has been added to inform the PSAP operator about undecoded MSD data;
- Subclause 7.7.1, 7.12.5 and 7.13.1 have been enhanced with generic requirements, which have been removed in EN 16062:2022, Clause 7.7;
- Subclause 7.10.1 has been adapted to better cover electrical vehicles;
- Subclause 7.17.3 has been adapted to comply with regulations;
- Subclause 11.3 has been changed to avoid conflicting requirements and renumbered to 10.2;
- Removed references to the type of (mobile) networks (e.g. circuit switched (GSM and UMTS) or packet switched (aka IMS eCall) where it caused text to be less readable or duplicated;
- Added clarification or reworded text to improve readability.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye 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 'Emergency Call' (eCall). In 2008 there were 38 900 fatalities in EU-27. The figure for 2009 is around 34 500 fatalities. The trend 2001 to 2008 is around 5 % reduction annually. Road accident injuries are in the region of 1,7 million (2008). Roads remain unsafe and further efforts are needed. The pan-European in-vehicle emergency call, eCall, is estimated to have the potential to save up to 2 500 fatalities annually in the EU when fully deployed and furthermore to reduce the severity of injuries, to bring significant savings to the society in and to reduce human suffering.

Emergency calls made from vehicles or mobile telephones using wireless technologies 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 is thus also contributing to the need for automated emergency call system in vehicles. In EU there are over 100 million trips to another EU country per year (EU-15). 65 % 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 proper communication difficult. Yet, in the most crucial cases, the victim(s) may not be able to call because they have been injured/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 and a sense of community.

eCall, in the context of 'Road Traffic and Transport Telematics' (otherwise known as 'Intelligent Transport Systems' or 'ITS'), can be described as an 'automatic or user instigated system to provide notification to Public Safety Answering Points (PSAP), by means of wireless communications, that a vehicle has crashed, and to provide coordinates, a defined Minimum Set of Data, and where possible a voice link to the PSAP'.

The objective of implementing the pan-European in-vehicle emergency call system (eCall) is to automate the notification of a traffic accident, wherever in the European Union and associated countries, with the same technical standards and the same quality of services objectives of other emergency (TS12) services.

Definition of the Minimum Set of Data, the communications media and means of transferring the data are not specified in this document.

This document specifies the generic operational requirements for the provision of an eCall service. The practical provision and operation of eCall service and equipment is dependent on the communications medium being available throughout the lifetime of equipment installed in vehicles.

NOTE The term PSAP, which is most widely used in the eCall documentation, European Commission documents etc., equates to the term emergency call response centre.

The European Committee for Standardization (CEN) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning eCall given in this document.

The patents held may refer to the implementation of eCall in general using the network access device referenced (but not defined) in this document, but do not specifically directly refer to any of the application specification clauses defined herein.

CEN takes no position concerning the evidence, validity and scope of these patent rights.

The holder of these patent rights has ensured to CEN that he/she is willing to negotiate licenses under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holders of these patent rights are registered with CEN. Information may be obtained from:

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. CEN shall not be held responsible for identifying any or all such patent rights.

1 Scope

The objective of implementing the pan-European in-vehicle emergency call system (eCall) is to automate the notification of a traffic accident, wherever in Europe, with the same technical standards and the same quality of services objectives by using 'Public Land Mobile Networks'(PLMN) (such as GSM and UMTS), which supports the European pre-assigned emergency destination address (see normative references) and to provide a means of manually triggering the notification of an incident.

This document specifies the general operating requirements and intrinsic procedures for in-vehicle emergency call (eCall) services in order to transfer an emergency message from a vehicle to a Public Safety Answering Point (PSAP) in the event of a crash or emergency, via an eCall communication session and to establish a voice channel between the in-vehicle equipment and the PSAP.

Private third party in-vehicle emergency supporting services may also provide a similar eCall function by other means. The provision of such services are defined in EN 16102, and are outside the scope of this document.

The communications protocols and methods for the transmission of the eCall message are not specified in this document.

This document specifies the operating requirements for an eCall service. An important part of the eCall service is a Minimum Set of Data (MSD). The operating requirements for the MSD are determined in this document, but the form and data content of the MSD is not defined herein. A common European MSD is determined in EN 15722.

This document does not specify whether eCall is provided using embedded equipment or other means (for example in the case of aftermarket equipment).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 15722:2020, *Intelligent transport systems - ESafety - ECall minimum set of data*

EN 16062, *Intelligent transport systems - ESafety - eCall high level application requirements (HLAP) using GSM/UMTS circuit switched networks*

EN 16454, *Intelligent transport systems - ESafety - ECall end to end conformance testing*

CEN/TS 17184, *Intelligent transport systems - eSafety - eCall High level application Protocols (HLAP) using IMS packet switched networks*

CEN/TS 17240, *Intelligent transport systems - ESafety - ECall end to end conformance testing for IMS packet switched based systems*

EN ISO 24978, *Intelligent transport systems - ITS Safety and emergency messages using any available wireless media - Data registry procedures (ISO 24978)*