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

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 16072:2011 sisaldab Euroopa standardi EN 16072:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 16072:2011 consists of the English text of the European standard EN 16072:2011.
Standard on kinnitatud Eesti Standardikeskuse 31.10.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.10.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 28.09.2011.	Date of Availability of the European standard text 28.09.2011.
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ICS 03.220.20, 13.200, 35.240.60, 43.040.15

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16072

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English Version

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

Systèmes intelligents de transport - ESafety - Exigences HLAP pour l'eCall

Intelligente Transportsysteme - ESicherheit - Paneuropäische Notruf-Betriebsanforderungen

This European Standard was approved by CEN on 18 August 2011.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Contents

Foreword

This document (EN 16072:2011) has been prepared by Technical Committee CEN/TC 278 "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of an identical text or by endorsement, at the latest by March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

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 '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 EU-27 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 European Standard.

This European Standard 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 European Standard may involve the use of patents concerning eCall given in this European Standard.

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

The holder of these patent rights has assured 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 3G), 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 European Standard 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.

NOTE 1   Private third party in-vehicle emergency supporting services may also provide a similar *eCall* function by other means. The provision of such services are being defined in EN 16102, and are outside the scope of this European Standard.

NOTE 2   The communications protocols and methods for the transmission of the *eCall* message are not specified in this European Standard.

NOTE 3   This European Standard 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 European Standard, but the form and *data content* of the MSD is not defined herein. A common European MSD is determined in EN 15722.

2   Conformance

Test requirements and conformance requirements are described in Clause 11. Conformance procedures will be specified in a separate deliverable and are outside of the scope of this European Standard.

3   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)*

EN 16062:2011, *Intelligent transport systems — eSafety — eCall high level application requirements (HLAP)*

EN ISO 24978, *Intelligent transport systems — ITS safety and emergency messages using any available wireless media — Data registry procedures (ISO 24978:2009)*

ETSI TS 122 101, *Universal Mobile Telecommunications System (UMTS); LTE; Service aspects; Service principles* (Release 8)

ETSI TS 124 008, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE;Mobile radio interface Layer 3 specification; Core network protocols; Stage 3* (Release 8)

ETSI TS 126 267, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); eCall data transfer; In-band modem solution; General description* (Release 8)

ETSI TS 126 268, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); eCall data transfer; In-band modem solution; ANSI-C reference code* (Release 8)

ETSI TS 126 269, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); eCall data transfer; In-band modem solution; Conformance testing* (Release 8)