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Irish Standard
I.S. EN 16072:2015

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

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I.S. EN 16072:2015

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EUROPEAN STANDARD

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

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

Intelligente Transportsysteme - ESicherheit - Paneuropäische Notruf-Betriebsanforderungen

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Foreword

This document (EN 16072:2015) 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of an identical text or by endorsement, at the latest by October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

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.

This document supersedes EN 16072:2011.

The following revisions have been introduced:

— References to CEN/TS 16454, and other relevant standards deliverables have been added;

— New notes have been added for clarification;

— Subclause 7.10.1 has been clarified;

— ‘Coverage’ has been replaced by ‘service area’ in 7.13.2;

— A paragraph has been removed from 7.13.3;

— The term USIM is now used consistently, and the term SIM is no longer used (for consistency with the ETSI eCall NAD standards deliverables);

— As later instantiations of eCall may use E_UTRAN or other communications technologies, references to ETSI standards are now made specific that they are in respect of GSM/UMTS instantiation;

— A clause (8.3) has been moved from EN 16062 re the role of USIM in managing false generation of eCalls);

— A clause (8.3) has been moved from EN 16062 re End of life management of IMEI;

— References/cross references have been updated;

— IVS has been changed to “IVS responsible for the eCall system” throughout;

— IVS redial (7.17.2) and PSAP call-back (7.17.3) have been reorganized and some content moved from one section to the other and the text clarified;

— Data storage. A reminder that data retention ‘shall respect European data protection regulations’ has been added to 7.17.4.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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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-28 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.

The patents held may refer to the implementation of eCall in general using the network access device referenced (but not defined) in this European Standard, 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.

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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 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.

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 European Standard.

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

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.

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

2 Normative references

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

EN 15722:2015, *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 24978:2009, *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)*

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