



SLOVENSKI STANDARD SIST-TS CEN/TS 17313:2019

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Inteligentni transportni sistemi - e-Varnost - Interoperabilnost in možnost izbire uporabnika med storitvijo e-Klic in storitvijo e-Klic tretjih oseb

Intelligent transport systems - ESafety - Interoperability and user choice in eCall aftermarket and third party eCall services

Intelligente Verkehrssysteme - eSicherheit - Austauschbarkeit und Nutzerwahl im eSicherheit-Zubehörmarkt und Drittanbieter eCall-Dienste

Système de transports intelligent - E Sécurité - Interopérabilité et choix de l'utilisateur dans les services après-vente eCall et les services eCall de fournisseurs privés

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**Intelligent transport systems - ESafety - Interoperability
and user choice in eCall aftermarket and third party eCall
services**

Systeme de transports intelligent - E Sécurité -
Interopérabilité et choix de l'utilisateur dans les
services après-vente eCall et les services eCall de
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Intelligente Verkehrssysteme - eSicherheit -
Austauschbarkeit und Nutzerwahl im eSicherheit-
Zubehörmarkt und Drittanbieter eCall-Dienste

This Technical Specification (CEN/TS) was approved by CEN on 6 January 2019 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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European foreword

This document (CEN/TS 17313:2019) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

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CEN/TS 17313:2019 (E)

Introduction

An *eCall* is an *emergency call* generated either automatically via activation of in-vehicle sensors or manually by the *vehicle occupants*. When activated, it provides notification and relevant location information to the most appropriate *Public Safety Answering Point (PSAP)* by means of 'mobile wireless communications networks', carries a defined standardized '*minimum set of data*', notifying that there has been an incident that requires response from the emergency services and establishes a voice channel between the occupants of the vehicle and the 'most appropriate PSAP'.

There are two principal variants of *eCall*:

- a) *112-eCall* (also known as Pan-European *eCall*);
- b) Third Party Service supported *eCall (TPS-eCall)* ; also known as Third Party *eCall*).

112-eCalls progress automatically from the vehicle directly to the *Public Safety Answering Point (PSAP)*.

Third Party Service supported *eCall* involves the service and the support of a Third Party *Service provider (TPSP)* as an intermediary entity, who may filter out false calls, determine if an *emergency call* requires the emergency service or other services (such as breakdown assistance), and may provide additional information requested by the owner of the vehicle to be passed to emergency services in the event of an *emergency call*, or where the vehicle does not have the capability to send the full MSD *data set*, may add *data* and consolidate the MSD before forwarding it to the PSAP. A TPSP may typically offer *TPS-eCall* as a part of a bundle of wider support services.

The deployment of *112-eCall* service in Europe is mandatory for all new models (classes M1, N1) as of 31 March 2018. According to Regulation (EU) 2015/758 a *TPS-eCall* service can co-exist provided that the measures necessary to ensure continuity in the provision of the service to the consumer are adopted; according to Regulation (EU) 2015/758 (3 c), the vehicle user must have the option to elect to use a *112-based eCall* in-vehicle system at any time.

Third Party *eCall* service is a private commercial service which may be offered optionally and supplementary to *112-eCall* service.

However, the possibility to choose and to change third party *eCall service provider* has not so far been defined regarding in-vehicle systems for third party *eCall* service, although interoperability and user choice are significant aspects for fair competition in the European Service Market.

According to Regulation (EU) 2015/758¹, open choice for users and fair competition should be ensured, as well as innovation should be encouraged, in order to boost the competitiveness of the European Union's information technology industry in the global market.

This document provides specification for such interoperability.

NOTE It is recognized that some *vehicle manufacturers* and *service providers* may not want or are unable to participate in such an open market. This document is therefore developed for voluntary use by parties who may wish to participate in an open market for service provision.

¹ See Regulation (EU) 2015/758 Recital 16.

1 Scope

This document provides a description for voluntarily consenting vendors (subsequently referred to as '*participating service providers*'), who wish to provide *TPS-eCall* service in an open market environment, where *users* can select and change the *service provider*. It focusses on the use case '*TPS-eCall* service', as standardized in EN 16102, only (and for clarification, does not apply in respect of *112-eCall*, where no TPS provider is involved.)

The document determines the preconditions, requirements and functional means needed in order that *users* of a *TPS-eCall* service can choose and change her/his preferred *service provider* (TPSP) out of a range of available TPSPs, who are participating in the open market provisions determined in this specification.

Outside the scope of this document are:

- a) any commercial considerations (e.g. whether the service is offered for free or a charged service or part of a commercial service package offer),
- b) any contractual considerations (e.g. how a service contract between an user and a TPSP is established),
- c) any IT-security related issues in conjunction with the TPS in-vehicle system,
- d) any considerations regarding communication costs (for voice and *data*) related to the *TPS-eCall* service
- e) any PSAP related considerations (towards the PSAPs there is no impact related to provider change, since any TPSP needs to negotiate acceptance of its service offering with the PSAPs in the countries where the service is provided, before such service can be provided).

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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, *Intelligent transport systems – ESafety - ECall minimum set of data*

EN 16072:2015, *Intelligent transport systems – ESafety - Pan-European eCall operating requirements*

EN 16102, *Intelligent transport systems – eCall - Operating requirements for third party support*

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

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

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3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

112

single European *emergency call* number

3.2

112-eCall

'eCall' provided by a 'Teleservice 12' mobile communication network, as defined in EN 16072 and EN 16062 or CEN/TS 17148

3.3

beneficiary

occupants/riders of the vehicle receiving the benefit of the *TPS-eCall* service/*112-eCall* service

Note 1 to entry: The occupants/riders of the vehicle may or may not be the owner or registered keeper of the vehicle, and may or may not have the ability to change *TPS-eCall* service provider.

3.4

data

representations of static or dynamic objects in a formalized manner suitable for communication, interpretation, or processing by humans or by machines

3.5

data dictionary

organized and constructed (electronic data base) compilation of descriptions of *data concepts* that provides a consistent means for documenting, storing and retrieving the syntactical form (i.e. representational form) and the meaning and connotation of '*eCall*' 'data concept'

Note 1 to entry: A *data registry* provides definition of the metadata concept, it does not store the values of individual instances. For example a *data registry* with a *data* concept 'registration plate identification of a vehicle' defines how the identification numbers/letters are represented. It does not contain a list of particular licence plates.

3.6

data element

single unit of information of interest (such as a fact, proposition, observation, etc.) about some (entity) class of interest (e.g. a person, place, process, property, concept, *association*, state, event) considered to be indivisible in a particular context

3.7

data registry

registration process to store *data* definitions, characterized in a consistent manner, as determined according to the provisions of an international standard, in a *data dictionary*

Note 1 to entry: Neither a *data registry* nor a *data dictionary* provides a *database* of specific values of instances of the use of the registry/dictionary in an implementation.

3.8**driver**

see vehicle driver

3.9**E112**

emergency communications service using the single European *emergency call* number, 112, which is enhanced with location information of the calling *user*

Note 1 to entry: See European Commission Recommendation C (2003) 2657.

3.10**eCall**

emergency call which is generated either automatically via activation of in-vehicle sensors or manually by the *vehicle occupants*, and which, when activated, provides notification and relevant location information to the most appropriate 'public safety answering points (PSAP)', by means of 'mobile wireless communications networks', carries a defined standardized '*minimum set of data*', notifying that there has been an incident that requires response from the emergency services and establishes a voice channel between the occupants of the vehicle and the 'most appropriate PSAP'

[SOURCE: EN 16072:2015, 3.8, modified – "Audio channel" was replaced with "voice channel" in this definition and the definition's structure was slightly modified.]

3.11**emergency call**

call from a *user* to an emergency control centre including and especially E112

3.12**independent service provider**

contracted third party who is contracted to supply the *TPS-eCall* service who is not the manufacturer of the vehicle (e.g. car insurance company, automobile club, insurer, etc.)

3.13**IVS dataset**

minimum set of vehicle-generated *data elements* which are essential for the performance of the '*TPS-eCall*'

Note 1 to entry: The format and content of this '*IVS data set*' is not defined by EN 16102, but it shall be possible for the *service provider* to create an MSD as defined in EN 15722 based on this '*IVS data set*'.

Note 2 to entry: This may be a sub-set of the MSD *data elements*, as some MSD elements can be inferred/looked-up from other elements by the TPSP.

3.14**keeper**

see vehicle keeper

3.15**most appropriate PSAP**

PSAP defined beforehand by national authorities to cover *emergency calls* from a certain area or for *emergency calls* of a certain type

Note 1 to entry: A number of different instantiations of PSAP service are supported within this document. A PSAP may be a Public Authority or a private service provider operating under the control of a Public Authority.

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3.16

minimum set of data (MSD)

standardized data concept, as specified in EN 15722, comprising data elements essential for the notification of a 'TPS-eCall' to a PSAP

3.17

interoperability service registration authority

non-aligned notarizing organization which checks, approves, certifies and registers Third Party *Service providers* which comply to national rules and to European Standards relevant for *TPS-eCall*

3.18

occupant

see vehicle occupant

3.19

owner

see vehicle owner

3.20

pan-European eCall

see 112-eCall

3.21

PARES

Public Authorities responsible for Emergency Services; generic term for the body responsible for PSAPs in its jurisdiction, the form of which may vary between Member States

3.22

participating service provider

third-party ministration supplier of TPS-eCall service and often also supplier of the TPS in-vehicle system equipment who consent to offer third party eCall service in an open market environment

Note 1 to entry: *TPS in-vehicle system provider* and TPSP may be the same entity or vendor. However, according to this TS, it is assumed that there are multiple n-to-m correlations where the *TPS in-vehicle system provider* and the TPSP are represented by different vendors.

3.23

Public Safety Answering Point (PSAP)

physical location where *emergency calls* are first received under the responsibility of a public authority or a private organization recognized by the national government, working on behalf of the responsible authorities.

Note 1 to entry: See also most appropriate PSAP.

Note 2 to entry: A number of different instantiations of PSAP service are supported within EN 16062/CEN/TS 17148.

3.24

registration authority

see interoperability service registration authority

3.25

service provider

contracted third party who is contracted to supply the *TPS-eCall* service

3.26**TPS-eCall**

transmission across a mobile network of a set of *data* from a vehicle to a *TPS-eCall responder (TPSP)* and the establishment of a voice channel between the vehicle and the *TPSP* which is connected to a “most appropriate PSAP” by the TPSP

Note 1 to entry: In summary, it includes the transmission of the ‘*IVS dataset*’ (plus possibly additional *data*) from the vehicle to a TPSP, and the establishment of a voice call from the vehicle with this TPSP. In the event of an emergency situation likely to require assistance from the emergency services, the TPSP shall establish a voice connection with the ‘most appropriate PSAP’. The TPSP shall also forward all relevant information concerning the event, including the information specified as mandatory by the MSD standard (EN 15722) as a minimum, to this ‘*most appropriate PSAP*’. The TPSP shall also provide voice communication between the PSAP and the *vehicle occupants*, at least by setting up a conference call, if this is required by any of the parties involved.

3.27**TPS-eCall set of data (TSD)**

data set in a format standardized within EN 16102, which can be used by a TPSP to forward details of a *TPS-eCall* to a PSAP

3.28**TPS in-vehicle equipment**

equipment within the vehicle that provides or has access to in-vehicle *data* required for the ‘*IVS data set*’ to effect the *TPS-eCall* transaction via a public mobile wireless communications network providing a link between the vehicle and a ‘TPS-eCall responder’

Note 1 to entry: The TPS in-vehicle equipment provider may be the *vehicle manufacturer* or the provider of aftermarket equipment.

3.29**TPS in-vehicle system (TPS-IVS)**

‘*TPS in-vehicle equipment*’ together with the means to trigger, manage and effect the ‘TPS-eCall transaction’

3.30**TPS in-vehicle system provider**

provider of a ‘TPS in-vehicle system’

Note 1 to entry: The ‘TPS in-vehicle system provider’ may be the *vehicle manufacturer* or the provider of aftermarket equipment

3.31**TPSP**

third party *service provider* organization, recognized by the national rescue authorities as being allowed to transmit ‘*TPS-eCall*’ to them, and compliant with the requirements of EN 16102 and of this document

Note 1 to entry: The TPSP has two roles, ‘responder’ and ‘TPS-eCall notifier’.

3.32**TSD**

TPS-eCall set of data: data set in a format standardized in EN 16102, which can be used by a TPSP acting as a TPS-eCall notifier to forward details of a *TPS-eCall* to a PSAP