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STN P	**Inteligentné dopravné systémy Elektronická bezpečnosť Testovanie zhody eCall od začiatku do konca na spínané IMS paketové systémy**	**STN P CEN/TS 17240** 01 8616

Intelligent transport systems - ESafety - ECall end to end conformance testing for IMS packet switched based systems

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/19

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English Version

Intelligent transport systems - ESafety - ECall end to end conformance testing for IMS packet switched based systems

Systèmes de transport intelligents - eSécurité - eCall: Essais de conformité du système " eCall " de bout en bout pour les systèmes IMS basés sur la commutation de paquets

Intelligente Verkehrssysteme - eSicherheit - eCall Ende-zu-Ende Konformitätsprüfungen für IMS-paketvermittelnde Systeme

This Technical Specification (CEN/TS) was approved by CEN on 20 August 2018 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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Contents

Page

European foreword ... 7
Introduction ... 8
1 Scope ... 9
2 Normative references ... 9
3 Terms and definitions ... 10
4 Symbols and abbreviations ... 15
5 Conformance ... 16
5.1 General ... 16
5.2 General conditions ... 16
6 General overview of the eCall transaction for pan-European eCall ... 16
7 How to use this Standard ... 21
7.1 Layout and procedures ... 21
7.2 System under test ... 22
7.3 Accelerated test procedures ... 22
7.4 Accelerated test procedures for IVSs ... 23
7.4.1 Accelerated test procedures for all types of 112-eCall IVS ... 23
7.4.2 Additional accelerated test procedures for 112-eCall only IVS ... 24
7.5 Accelerated test procedures for MNOs ... 25
7.6 Accelerated test procedures for PSAPs – 112-eCall ... 25
8 Requirements ... 27
8.1 Requirements - General objectives ... 27
8.1.1 State transitions ... 27
8.1.2 Classification of testing ... 33
8.1.3 CTP naming conventions ... 35
8.1.4 CTP naming convention for IVS conformance tests ... 36
8.2 CTP structure ... 36
9 Conformance test requirements for in-vehicle IMS user equipment and systems (IVS) ... 38
9.1 Conformance test requirements for in-vehicle user equipment and systems for IMS-eCall (112-eCall/Pan European eCall) ... 38
9.2 Test objectives and purposes ... 38
9.3 Classification of testing and referenced tests for in-vehicle user equipment for 112-eCall (Pan European eCall) IVS ... 38
9.3.1 Taxonomy of testing ... 38
9.3.2 Referenced tests ... 38
9.4 State transition conformance tests for in-vehicle equipment and system to comply to Standards for 112-eCall (Pan European eCall) ... 39
9.4.1 Conformance requirement ... 39
9.4.2 Use case test objectives by stage ... 39
9.4.3 CTP 1.1.0.1IMS — Conformance to ETSI TS 136 523 and ETSI TS 134 229 – 112-eCall IVS via IMS ... 42
9.4.4 CTP 1.1.0.2 — Test for conformance to valid SIM/USIM – 112-eCall ... 42

9.4.5 CTP 1.1.0.3 — Automatic eCall triggering does not occur when engine control OFF – 112-eCall IVS 43
9.4.6 CTP 1.1.1.1 — Power on and self test – 112-eCall IVS 44
9.4.7 CTP 1.1.2.1 — Test for automatic activation of eCall 45
9.4.8 CTP 1.1.2.2 — Automatically triggered eCall in progress was not disconnected upon a new eCall trigger – 112-eCall IVS 46
9.4.9 CTP 1.1.2.3 — Post-Lateral-crash performance of automatic trigger – IVS 47
9.4.10 CTP 1.1.2.4 — Post-frontal-crash performance of automatic trigger - IVS 48
9.4.11 CTP 1.1.2.5 — Performance of automatic trigger – Different crash types 49
9.4.12 CTP 1.1.3.1 — eCall manually activated – 112-eCall IVS 50
9.4.13 CTP 1.1.3.2 — Manually triggered eCall in progress was not disconnected upon a new eCall trigger – 112-eCall IVS 51
9.4.14 CTP 1.1.4.1 — Test eCall activated – 112-eCall IVS 52
9.4.15 CTP 1.1.5.1 — Network registration – 112-eCall IVS 53
9.4.16 CTP 1.1.5.2 — Manual termination of eCall by vehicle occupants not allowed (automatically triggered eCall) – 112-eCall IVS 54
9.4.17 CTP 1.1.5.3 — Manual termination of eCall by vehicle occupants not allowed (manually triggered eCall) – 112-eCall IVS 55
9.4.18 CTP 1.1.5.4 — Automatically triggered eCall in progress was not disconnected when ignition is switched to OFF – 112-eCall IVS 56
9.4.19 CTP 1.1.5.5 — Manually triggered eCall in progress was not disconnected when engine control is switched to OFF – 112-eCall IVS 57
9.4.20 CTP 1.1.5.6-IMS — Priority over conflicting communication – 112-eCall IVS 58
9.4.21 CTP 1.1.5.7 — Network registration is re-tried when network registration attempt was not successful – 112-eCall IVS 59
9.4.22 CTP 1.1.6.1-IMS — SIP Invite sent 59
9.4.23 CTP 1.1.7.1-IMS — Establish session with urn:service:sos.ecall.automatic – 112-eCall IVS 60
9.4.24 CTP 1.1.8.1-IMS — Establish session with urn:service:sos.ecall.manual – 112-eCall IVS 61
9.4.25 CTP 1.1.9.1-IMS — Set-up call to test address – 112-eCall IVS 62
9.4.26 CTP 1.1.10.1-IMS — eCall is attempted when no networks are available (limited service condition) – 112-eCall IVS 63
9.4.27 CTP 1.1.10.2-IMS — Re-dial attempt completed within 2 min after eCall is dropped – 112-eCall IVS 63
9.4.28 CTP 1.1.10.3 –IMS — ALLOW ACK Received 63
9.4.29 CTP 1.1.15.1-IMS — Voice link Established – 112-eCall IVS 64
9.4.30 CTP 1.1.15.2-IMS — Verify MSD Received – 112-eCall IVS 65
9.4.31 CTP 1.1.16.1 — Clear down call automatically – PE eCall IVS 65
9.4.32 CTP 1.1.16.2-IMS — IVS clears down the eCall upon T2 expiry – 112-eCall IVS 66
9.4.33 CTP 1.1.16.3-IMS — IVS registers recent eCalls – 112-eCall IVS 67
9.4.34 CTP 1.1.17.1-IMS — Call-back allowed and able to be answered by IVS – 112-eCall IVS 68
9.4.35 CTP 1.1.17.2-IMS — Call-back answered by IVS in the event of abnormal termination – 112-eCall IVS 69
9.4.36 CTP 1.1.17.3-IMS — MSD transfer occurs upon PSAP request during call-back – 112-eCall IVS 70
9.4.37 CTP 1.1.17.4-IMS — Remain registered for ≥ 1 hr – 112-eCall IVS 71
9.5 State transition test scripts for in-vehicle equipment and system to comply to Standards for 112-eCall (Pan European eCall) – additional tests for eCall only systems 71
9.5.1 General 71
9.5.2 CTP 1.1.1.2-IMS — IVS does not perform registration after power-up – 112-eCall only IVS 73

9.5.3 CTP 1.1.1.3-IMS — IVS periodically scans and maintains a list of available PLMNs – 112-eCall only ... 73
9.5.4 CTP1.1.10.4 — Verify that PLMN registration procedure is executed upon initiating an eCall – 112-eCall only IVS ... 74
9.5.5 CTP 1.1.17.5-IMS — Remain registered for ≥ 1 hr ≤ 12 hr – 112-eCall only IVS ... 75

10 Conformance tests for mobile network operators ... 75
10.1 Test objectives and purposes ... 75
10.1.1 General ... 75
10.1.2 Default assumptions ... 76
10.2 Taxonomy of testing and referenced tests ... 76
10.3 Use case conformance tests for mobile network operator systems to comply to Standards for 112-eCall (Pan European eCall) ... 76
10.3.1 Conformance requirement ... 76
10.3.2 Use case test objectives by stage ... 76
10.4 State transition test scripts for mobile network operators to demonstrate compliance with 112-eCall (Pan European eCall) standards ... 77
10.4.1 General ... 77
10.4.2 CTP 2.0.1 — Keep SIMs/USIMs alive even though not in regular operation – MNO ... 79
10.4.3 CTP 2.0.2-IMS — MNO supports general eCall relevant requirements ... 80
10.4.4 CTP 2.0.3 — Decommission SIM/USIM - MNO ... 81
10.4.5 CTP 2.0.4-IMS — Support IMS-eCall routing – MNO ... 81
10.4.6 CTP 2.1.1 — Accept registration – Home network – MNO ... 82
10.4.7 CTP 2.1.2 — Accept registration – Roaming –MNO ... 82
10.4.8 CTP 2.2.1.1-IMS — Establish IMS-eCall (automatically initiated) – MNO ... 83
10.4.9 CTP 2.2.1.2-IMS — Route call to 'most appropriate' PSAP – MNO ... 84
10.4.10 CTP 2.2.1.3-IMS — Provide IMS emergency data/caller ID – MNO ... 85
10.4.11 CTP 2.2.2.1-IMS — Receive IMS-eCall (manual initiated) – MNO ... 86
10.4.12 CTP 2.2.3.1-IMS — Test for receiving test eCall ... 86
10.4.13 CTP 2.2.3.2 — Route call to non-emergency number – MNO ... 86
10.4.14 CTP 2.2.3.3 — Provide CLI for test eCall – MNO ... 87
10.4.15 CTP 2.3.1 — Call in progress–MNO ... 87
10.4.16 CTP 2.5.1 — Support call-back – MNO ... 88
10.4.17 CTP 2.6.1 — Maintain registration for 1-12 h – MNO ... 88
10.4.18 CTP 2.7.1 — Maintain call records - MNO ... 88

11 Conformance tests for PSAP systems ... 88
11.1 Test objectives and purposes ... 88
11.2 Taxonomy of testing and referenced tests ... 89
11.2.1 Taxonomy of testing ... 89
11.2.2 Referenced tests ... 89
11.3 Use case conformance tests for PSAP systems to comply to Standards for 112-eCall (Pan European eCall) ... 89
11.3.1 Conformance requirement ... 89
11.3.2 Use case test objectives by stage ... 89
11.4 State transition conformance tests for PSAPs – 112-eCall ... 90
11.4.1 General ... 90
11.4.2 CTP 3.1.0.1-IMS — Provide MNOs with appropriate routing data – Member State/ PSAP IMS-eCall ... 92
11.4.3 CTP 3.1.0.2 — Maintain map geo-information – PSAP IMS-eCall ... 93
11.4.4 CTP 3.1.1.1-IMS — Receive automatically initiated eCall – PSAP IMS-eCall ... 94
11.4.5 CTP 3.1.1.2-IMS — Receive manually initiated eCall – PSAP IMS-eCall ... 95
11.4.6 CTP 3.1.2-IMS — Interpret IMS emergency data- Caller ID and location – PSAP IMS-eCall ... 96
11.4.7 CTP 3.1.3.2-IMS — PSAP equipment failure – PSAP IMS-eCall ... 96

11.4.8 CTP 3.1.5.2-IMS — Route to operator after T4 expiration – PSAP 112-eCall 96
11.4.9 CTP 3.1.7.1-IMS — Receive MSD – PSAP IMS-eCall 97
11.4.10 CTP 3.1.7.2-IMS — Verify status bit in AL-ACK upon positive ACK– PSAP 112-eCall 98
11.4.11 CTP 3.1.7.4-IMS — Verify transfer of corrupted MSD – PSAP IMS-eCall 98
11.4.12 CTP 3.1.7.5-IMS — Verify PSAP behaviour when MSD format check fails– PSAP IMS-eCall 99
11.4.13 CTP 3.1.8 — ACK – PSAP IMS-eCall 99
11.4.14 CTP 3.1.9-IMS — Route voice and MSD to operator – PSAP IMS-eCall 100
11.4.15 CTP 3.1.10-IMS — Display IMS-eCall data and MSD to operator – PSAP IMS-eCall 101
11.4.16 CTP 3.1.11-IMS — Decode VIN – PSAP IMS-eCall 102
11.4.17 CTP 3.1.12-IMS — Talk to vehicle occupants – PSAP IMS-eCall 103
11.4.18 CTP 3.1.13-IMS — Request new MSD before call cleardown – PSAP IMS-eCall 104
11.4.19 CTP 3.1.14.1 — Call cleardown – PSAP IMS-eCall 105
11.4.20 CTP 3.1.14.2-IMS — Verify status bit in AL-ACK upon cleardown - PSAP –112-eCall 105
11.4.21 CTP 3.1.15-IMS — Call-back to vehicle – PSAP 112-eCall 106
11.4.22 CTP 3.1.16-IMS — Request new MSD after call cleardown – PSAP IMS-eCall 107

12 Marking, labelling and packaging 107

13 Declaration of patents and intellectual property 108

Annex A (normative) **Proforma conformance test report for 112-eCall (Pan European eCall) in-vehicle system (IVS) 109**
A.1 Conformance test report 109
A.1.1 System under test: 109
A.1.2 System under test identification 109
A.1.3 Testing environment 110
A.1.4 Limits and reservation 110
A.1.5 Comments 110
A.2 SUT conformance status 110
A.3 Static conformance summary 111
A.4 Dynamic conformance summary 111
A.5 Static conformance review report 111
A.6 Test campaign report 112
A.7 Observations 113

Annex B (normative) **ProForma conformance test report for mobile network operator (MNO) 114**
B.1 Conformance test report 114
B.1.1 System under test: 114
B.1.2 System under test identification 114
B.1.3 Testing environment 115
B.1.4 Limits and reservation 115
B.1.5 Comments 115
B.2 SUT conformance status 115
B.3 Static conformance summary 116
B.4 Dynamic conformance summary 116
B.5 Static conformance review report 116
B.6 Test campaign report 117
B.7 Observations 117

Annex C (normative) **ProForma conformance test report for public service answering point (PSAP) 118**
C.1 Conformance test report 118
C.1.1 System under test: 118

C.1.2 System under test identification 118
C.1.3 Testing environment 119
C.1.4 Limits and reservation 119
C.1.5 Comments 119
C.2 SUT conformance status 119
C.3 Static conformance summary 120
C.4 Dynamic conformance summary 120
C.5 Static conformance review report 120
C.6 Test campaign report 121
C.7 Observations 122

Bibliography 123

European foreword

This document (CEN/TS 17240:2018) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

An *eCall* is an emergency call generated either automatically via activation of in-vehicle sensors or manually by the *vehicle occupants (3.36)*; when activated, to provide notification and relevant location information to the most appropriate *Public Safety Answering points* (PSAP), by means of *mobile wireless communications networks (3.22)* and carries a defined standardized *minimum set of data (3.21)*, notifying that there has been an incident that requires response from the emergency services and establishes an audio channel between the occupants of the vehicle and the *most appropriate PSAP (3.23)*.

NOTE 1 EN 15722 specifies a standardized MSD for *eCall*, EN 16062 specifies high level application protocols for eCall and EN 16072 specifies pan-European *eCall* operating requirements. For third party systems, EN 16102 specifies third party services supporting *eCall* operating requirements. (See EC Communication on *eCall* Implementation 2009 [COM(2009) 434 final] for more information.)

The operating requirements for pan-European *eCall* are made using Public Land Mobile Networks (PLMN) (such as GSM and 3G), as specified in a number of ETSI standards and technical specifications.

While EN 16062 provided high level application protocols (HLAP) for eCall using GSM/UMTS circuit switched networks, a new Standards Deliverable CEN/TS 17184 has been developed for the provision of eCall using IMS packet switched networks.

European Regulations require support of eCall by *vehicle manufacturers (3.35)*, other eCall IVS manufacturers, MNO's and PSAPs. (See Clause 2, Normative References).

This Standards Deliverable provides a complete suite for the support of IMS-eCall and may be used to test IMS-eCall aspects of *eCall service (3.13)* provision. Where appropriate, the tests of EN 16454 are replicated, revised or replaced. EN 16454 Conformance Tests that are required in a GSM/UMTS environment but not appropriate in an IMS environment are removed. Where new conformance tests are required for IMS, they have been added as new tests. The reference numbering of conformance tests in this environment are consistent with those in EN 16454 with the addition of the letters "IMS".

This deliverable provides tests to enable actors in the eCall chain to be able to claim conformance to the IMS-eCall standards, even though they are unable to control the behaviour of systems of other actors in the eCall chain

NOTE 2 Conformance tests in this document allow demonstration that a system complies with the IMS-eCall Standards. Compliance to Standards is a prerequisite to providing an interoperable compliant system, but do not by themselves demonstrate that a system will function nor guarantee the quality of service.

NOTE 3 The term PSAP (Public Safety Assistance Point), which is most widely used in the *eCall* documentation, European Commission documents, etc., is used throughout this document and equates to the term *emergency call response centre (3.15)* used in the ITS Implementation Directive.

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 EN 16062 and various ETSI standards for the *network access device (3.24)* and cellular mobile networks.

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

1 Scope

This document defines the key actors in the eCall chain of service provision using IMS over packet switched networks (such as LTE/4G) as:

1) *In-vehicle system (3.20)* (IVS)/vehicle,

2) Mobile network Operator (MNO),

3) *Public safety answering point (3.27)* (PSAP),

and to provide conformance tests for actor groups 1) – 3).

NOTE 1 Conformance tests are not appropriate nor required for *vehicle occupants (3.36)*, although they are the recipient of the service.

NOTE 2 Third party eCall systems (TPS eCall) are not within the scope of this deliverable. This is because the core *TPS-eCall (3.32)* standard (EN 16102) does not specify the communications link between the vehicle and the TPS *service provider (3.29)*.

NOTE 3 These conformance tests are based on the appropriate conformance tests from EN 16454 which was published before Internet Protocol multimedia Systems (IMS) packet switched networks were available. This deliverable therefore replicates the appropriate tests from EN 16454 (and acknowledge their source); adapt and revise Conformance Test Protocols (CTP) from EN 16454 to an IMS paradigm; or provide new additional tests that are required for the IMS paradigm. Some 14 112-eCall (Pan European eCall) tests provided in EN 16454 are specific to GSM/UMTS circuit switched communications and not appropriate for the IMS paradigm and are therefore excluded from this deliverable.

This document therefore provides a suite of ALL conformance tests for IVS equipment, MNO's, and PSAPS, required to ensure and demonstrate compliance to CEN/TS 17184.

NOTE 4 Because in the event of non-viability or non-existence of an IMS supporting network at any particular time/location, IMS-eCall systems revert to CS networked eCall systems eCall via GSM/UMTS, IVS and PSAPs need to support, and prove compliance to both IMS and CS switched networks.

The Scope covers conformance testing (and approval) of new engineering developments, products and systems, and does not imply testing associated with individual installations in vehicles or locations.

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

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

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

CEN/TS 17184:2018, *Intelligent transport systems — eSafety — eCall High level application Protocols (HLAP) using IMS packet switched networks*

ETSI TS 102 936-1, *eCall Network Access Device (NAD) conformance specification; Part 1: Protocol test specification*

ETSI TS 102 936-2, *eCall Network Access Device (NAD) conformance specification; Part 2: Test suites*

ETSI TR 102 937, *eCall communications equipment; Conformance to EU vehicle regulations, R&TTE, EMC & LV Directives, and EU regulations for eCall implementation*

ETSI TS 122 003 (2017-03), *Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Circuit Teleservices supported by a Public Land Mobile Network (PLMN) (3GPP TS 22.003 version 14.0.0 Release 14)*

ETSI TS 122 011, *Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Service accessibility (3GPP TS 22.011 version 14.7.0 Release 14)*

ETSI TS 123 122, *Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Non-Access-Stratum (NAS) functions related to Mobile Station (MS) in idle mode (3GPP TS 23.122 version 14.4.0 Release 14)*

ETSI TS 124 008, *Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Mobile radio interface Layer 3 specification; Core network protocols; Stage 3 (3GPP TS 24.008 version 8.20.0 Release 8)*

ETSI TS 131 102, *Universal Mobile Telecommunications System (UMTS); LTE; Characteristics of the Universal Subscriber Identity Module (USIM) application (3GPP TS 31.102 version 14.4.0 Release 14)*

ETSI TS 134 123-1 (2018-01), *Universal Mobile Telecommunications System (UMTS); User Equipment (UE) conformance specification; Part 1: Protocol conformance specification (3GPP TS 34.123-1 version 14.3.0 Release 14)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN