

<b>STN</b>	<b>Inteligentné dopravné systémy. Elektronická bezpečnosť. Testovanie zhody eCall od začiatku do konca.</b>	<b>STN EN 16454</b>  01 8519
------------	---	--

Intelligent transport systems - ESafety - ECall end to end conformance testing

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. 12/15

Obsahuje: EN 16454:2015

Oznámením tejto normy sa ruší  
STN P CEN/TS 16454 (01 8519) z októbra 2013

**121990**

EUROPEAN STANDARD

**EN 16454**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2015

ICS 35.240.60

Supersedes CEN/TS 16454:2013

English Version

## Intelligent transport systems - ESafety - ECall end to end conformance testing

Systèmes de transport intelligents - eSécurité - Essais de conformité du système " eCall " de bout en bout

Intelligente Verkehrssysteme - ESicherheit - Vollständige Konformitätsprüfungen für eCall

This European Standard was approved by CEN on 17 July 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
European foreword.....	9
Introduction .....	10
1 Scope.....	11
2 Normative references.....	11
3 Terms and definitions .....	12
4 Symbols and abbreviations .....	17
5 Conformance.....	19
5.1 General.....	19
5.2 General conditions.....	19
6 General overview of the eCall transaction for pan-European eCall.....	20
7 How to use this Standard.....	24
7.1 Layout and procedures .....	24
7.2 System under test.....	25
7.3 Accelerated test procedures .....	26
7.4 Accelerated test procedures for IVSs .....	26
7.4.1 Accelerated test procedures for all types of PE eCall IVS .....	26
7.4.2 Additional accelerated test procedures for PE eCall only IVS.....	28
7.5 Accelerated test procedures for MNOs.....	28
7.6 Accelerated test procedures for PSAPs – PE eCall.....	29
7.7 Accelerated test procedures for PSAPs – TPS-eCall.....	30
7.8 Accelerated test procedures for TPSPs .....	30
8 Requirements.....	31
8.1 Requirements - General objectives.....	31
8.1.1 State transitions.....	31
8.1.2 Classification of testing .....	41
8.1.3 CTP naming conventions .....	43
8.1.4 CTP naming convention for IVS conformance tests.....	44
8.2 CTP structure.....	44
9 Conformance test requirements for in-vehicle user equipment and systems (IVS) .....	46
9.1 Conformance test requirements for in-vehicle user equipment and systems for Pan European eCall .....	46
9.2 Test objectives and purposes .....	46
9.3 Classification of testing and referenced tests for in-vehicle user equipment for Pan European eCall IVS.....	46
9.3.1 Taxonomy of testing.....	46
9.3.2 Referenced tests .....	46
9.4 State transition conformance tests for in-vehicle equipment and system to comply to Standards for pan European eCall.....	47
9.4.1 Conformance requirement .....	47
9.4.2 Use case test objectives by stage.....	47
9.4.3 CTP 1.1.0.1 Conformance to ETSI TS 102 936-1 and ETSI TS 102 936-2 – PE eCall IVS.....	50
9.4.4 CTP 1.1.0.2 Test for conformance to valid SIM/USIM – PE eCall.....	51

9.4.5	CTP 1.1.0.3	Automatic eCall triggering does not occur when ignition OFF – PE eCall IVS.....	52
9.4.6	CTP 1.1.1.1	Power on and self test – PE eCall IVS .....	53
9.4.7	CTP 1.1.2.1	eCall automatically activated – PE eCall IVS.....	54
9.4.8	CTP 1.1.2.2	Automatically triggered eCall in progress was not disconnected upon a new eCall trigger – PE eCall IVS.....	55
9.4.9	CTP 1.1.2.3	Post-side-crash performance of automatic trigger - IVS .....	56
9.4.10	CTP 1.1.2.4	Post-frontal-crash performance of automatic trigger - IVS.....	57
9.4.11	CTP 1.1.2.5	Performance of automatic trigger – different crash types - IVS.....	58
9.4.12	CTP 1.1.3.1	eCall manually activated – PE eCall IVS .....	59
9.4.13	CTP 1.1.3.2	Manually triggered eCall in progress was not disconnected upon a new eCall trigger – PE eCall IVS.....	60
9.4.14	CTP 1.1.4.1	Test eCall activated – PE eCall IVS .....	61
9.4.15	CTP 1.1.5.1	Network registration – PE eCall IVS .....	62
9.4.16	CTP 1.1.5.2	Manual termination of eCall by vehicle occupants not allowed (automatically triggered eCall) – PE eCall IVS.....	63
9.4.17	CTP 1.1.5.3	Manual termination of eCall by vehicle occupants not allowed (manually triggered eCall) – PE eCall IVS.....	64
9.4.18	CTP 1.1.5.4	Automatically triggered eCall in progress was not disconnected when ignition is switched to OFF – PE eCall IVS.....	65
9.4.19	CTP 1.1.5.5	Manually triggered eCall in progress was not disconnected when ignition is switched to OFF – PE eCall IVS.....	66
9.4.20	CTP 1.1.5.6	Priority over conflicting communication – PE eCall IVS.....	67
9.4.21	CTP 1.1.5.7	Network registration is re-tried when network registration attempt was not successful – PE eCall IVS.....	68
9.4.22	CTP 1.1.6.1	Mute IVS and vehicle audio – PE eCall IVS.....	68
9.4.23	CTP 1.1.7.1	Set-up TS12 call with eCall identifier (flag) set to ‘automatic’ – PE eCall IVS.....	69
9.4.24	CTP 1.1.8.1	Set-up TS12 call with eCall identifier (flag) set to ‘manual’ – PE eCall IVS.....	70
9.4.25	CTP 1.1.9.1	Set-up TS11 call to test number – PE eCall IVS.....	71
9.4.26	CTP 1.1.10.1	eCall is attempted when no networks are available (limited service condition) – PE eCall IVS.....	72
9.4.27	CTP 1.1.10.2	Re-dial attempt completed within 2 minutes after eCall is dropped – PE eCall IVS.....	73
9.4.28	CTP 1.1.10.3	Duration of eCall Initiation signal – PE eCall IVS .....	74
9.4.29	CTP 1.1.11.1	Send MSD with indicator set to ‘Automatically Initiated eCall’ (AleC) – PE eCall IVS.....	75
9.4.30	CTP 1.1.12.1	Send MSD with indicator set to ‘Manually Initiated eCall’ (MleC) – PE eCall IVS.....	76
9.4.31	CTP 1.1.13.1	Send MSD with indicator set to ‘Test Call’ – PE eCall IVS.....	77
9.4.32	CTP 1.1.14.1	Verify MSD transfer – PE eCall IVS .....	78
9.4.33	CTP 1.1.14.2	Un-mute IVS audio when AL-ACK received – PE eCall IVS .....	79
9.4.34	CTP 1.1.15.1	Establish voice link to PSAP – PE eCall IVS.....	80
9.4.35	CTP 1.1.15.2	MSD transfer request while eCall conversation in progress – PE eCall IVS.....	81
9.4.36	CTP 1.1.15.3	eCall continuation when SEND MSD request not received (T5 expired) – PE eCall IVS .....	83
9.4.37	CTP 1.1.15.4	Call continuation when AL-ACK not received (T6 expired) – PE eCall IVS.....	84
9.4.38	CTP 1.1.15.5	MSD is transferred continuously until T7 expires and IVS reconnects loudspeaker and microphone on its expiry – PE eCall IVS .....	85
9.4.39	CTP 1.1.16.1	Clear down call automatically – PE eCall IVS.....	86
9.4.40	CTP 1.1.16.2	IVS clears down the eCall upon T2 expiry – PE eCall IVS .....	88
9.4.41	CTP 1.1.16.3	IVS registers recent eCalls – PE eCall IVS.....	89

9.4.42	CTP 1.1.17.1	Call-back allowed and able to be answered by IVS – PE eCall IVS.....	90
9.4.43	CTP 1.1.17.2	Call-back answered by IVS in the event of abnormal termination – PE eCall IVS .....	91
9.4.44	CTP 1.1.17.3	MSD transfer occurs upon PSAP request during call-back – PE eCall IVS.....	92
9.4.45	CTP 1.1.17.4	Remain registered for $\geq 1$ hr – PE eCall IVS.....	93
9.5		State transition test scripts for in-vehicle equipment and system to comply to Standards for pan European eCall – additional tests for eCall only systems.....	94
9.5.1		General.....	94
9.5.2	CTP 1.1.1.2	IVS does not perform registration after power-up – PE eCall only IVS.....	95
9.5.3	CTP 1.1.1.3	IVS periodically scans and maintains a list of available PLMNs – PE eCall only.....	95
9.5.4	CTP 1.1.10.4	Verify that PLMN registration procedure is executed upon initiating an eCall – PE eCall only IVS.....	96
9.5.5	CTP 1.1.17.5	Remain registered for $\geq 1$ hr $\leq 12$ hr – PE eCall only IVS.....	97
9.6		State transition conformance test requirements for in-vehicle user equipment for eCall TPS-IVS via a third party service provider.....	98
9.6.1		General.....	98
9.6.2		Test objectives and purposes .....	98
9.6.3		Taxonomy of testing and referenced tests .....	98
9.6.4		Taxonomy of testing.....	98
9.7		Use case conformance tests for in-vehicle equipment and system to comply to Standards for third party service provider eCall.....	98
9.7.1		Conformance requirement .....	98
9.7.2		Use case test objectives by stage.....	99
9.8		State transition test scripts for TPS in-vehicle equipment and system to comply to Standards for third party services supported eCall .....	101
9.8.1		General.....	101
9.8.2	CTP 1.2.0	Pre operation - TPS-IVS .....	102
9.8.3	CTP 1.2.1	Power on self test - TPS-IVS .....	104
9.8.4	CTP 1.2.2	Automatically activate eCall - TPS-IVS .....	105
9.8.5	CTP 1.2.3	Manually activate eCall - TPS-IVS.....	113
9.8.6	CTP 1.2.4	Stop conflicting communication – TPS-IVS.....	117
9.8.7	CTP 1.2.5	Establish voice link to TPSP - TPS-IVS.....	118
9.8.8	CTP 1.2.6	Send IVS dataset to TPSP - TPS-IVS.....	123
9.8.9	CTP 1.2.7	Establish voice link between PSAP and occupants - TPS-IVS.....	129
9.8.10	CTP 1.2.8	Cleardown call - TPS-IVS .....	130
9.8.11	CTP 1.2.9	Allow call-cack into vehicle - TPS-IVS.....	131
10		Conformance tests for mobile network operators.....	136
10.1		Test objectives and purposes .....	136
10.1.1		General.....	136
10.1.2		Default assumptions .....	136
10.2		Taxonomy of testing and referenced tests .....	136
10.3		Use case conformance tests for mobile network operator systems to comply to Standards for pan European eCall.....	136
10.3.1		Conformance requirement .....	136
10.3.2		Use case test objectives by stage.....	136
10.4		State transition test scripts for mobile network operators to demonstrate compliance with Pan European eCall Standards .....	138
10.4.1		General.....	138
10.4.2	CTP 2.0.1	Keep SIMs/USIMs alive even though not in regular operation – MNO .....	139
10.4.3	CTP 2.0.2	MNO supports general eCall relevant requirements.....	140
10.4.4	CTP 2.0.3	Decommission SIM/USIM - MNO .....	141
10.4.5	CTP 2.0.4	Support eCall Flag – MNO .....	142

10.4.6	CTP 2.1.1	Accept registration – Home network – MNO .....	142
10.4.7	CTP 2.1.2	Accept registration – Roaming – MNO .....	143
10.4.8	CTP 2.2.1.1	Receive TS12 voice call (automatically initiated) – MNO.....	144
10.4.9	CTP 2.2.1.2	Route call to ‘most appropriate’ PSAP – MNO.....	145
10.4.10	CTP 2.2.1.3	Provide TS12 data/caller ID – MNO .....	146
10.4.11	CTP 2.2.2.1	Receive TS12 voice call (manual initiated) – MNO.....	147
10.4.12	CTP 2.2.3.1	Test for receiving test eCall (TS11).....	147
10.4.13	CTP 2.2.3.2	Route call to non-emergency number – MNO.....	147
10.4.14	CTP 2.2.3.3	Provide TS11 data – MNO .....	148
10.4.15	CTP 2.3.1	Call in progress–MNO .....	148
10.4.16	CTP 2.4.1	Call clear-down – MNO.....	149
10.4.17	CTP 2.5.1	Support call-back – MNO .....	150
10.4.18	CTP 2.6.1	Maintain registration for 1-12 hours – MNO.....	150
10.4.19	CTP 2.7.1	Maintain call records - MNO.....	150
10.5		Use case conformance tests for mobile network operator systems to comply to Standards for TPS-eCall.....	151
10.5.1		Conformance requirement.....	151
10.5.2		Use case test objectives by stage .....	151
10.6		State transition test scripts for mobile network operators to demonstrate compliance with TPS-eCall Standards.....	151
10.6.1	CTP 2.11.1	MNO supports general TPS-eCall relevant requirements.....	151
10.6.2	CTP 2.11.2	Support call-back – MNO .....	151
11		Conformance tests for PSAP systems.....	152
11.1		Test objectives and purposes.....	152
11.2		Taxonomy of testing and referenced tests.....	152
11.2.1		Taxonomy of testing.....	152
11.2.2		Referenced tests.....	152
11.3		Use case conformance tests for PSAP systems to comply to Standards for pan European eCall.....	152
11.3.1		Conformance requirement.....	152
11.3.2		Use case test objectives by stage .....	152
11.4		State transition conformance tests for PSAPs – PE eCall .....	153
11.4.1		General .....	153
11.4.2	CTP 3.1.0.1	Provide MNOs with appropriate routing data – Member State/ PSAP PE eCall .....	155
11.4.3	CTP 3.1.0.2	Maintain map geo-information – PSAP PE eCall .....	156
11.4.4	CTP 3.1.1.1	Receive automatically initiated eCall – PSAP PE eCall .....	157
11.4.5	CTP 3.1.1.2	Receive manually initiated eCall – PSAP PE eCall .....	158
11.4.6	CTP 3.1.2	Receive TS12 data- Caller ID & location – PSAP PE eCall .....	159
11.4.7	CTP 3.1.3.1	Recognise eCall and route to in-band modem – PSAP PE eCall.....	160
11.4.8	CTP 3.1.3.2	PSAP equipment failure – PSAP PE eCall.....	161
11.4.9	CTP 3.1.3.3	PSAP modem failure before link layer ACK is sent – PSAP PE eCall .....	162
11.4.10	CTP 3.1.4	eCall received at in-band modem – PSAP PE eCall .....	163
11.4.11	CTP 3.1.5.1	Validate initiation signal – PSAP PE eCall.....	164
11.4.12	CTP 3.1.5.2	Route to operator after T4 expiration – PSAP PE eCall.....	165
11.4.13	CTP 3.1.6	Request MSD – PSAP PE eCall.....	166
11.4.14	CTP 3.1.7.1	Receive MSD – PSAP PE eCall.....	167
11.4.15	CTP 3.1.7.2	Verify status bit in AL-ACK upon positive ACK– PSAP PE eCall.....	168
11.4.16	CTP 3.1.7.3	Verify MSD transfer upon T8 expiration – PSAP PE eCall .....	169
11.4.17	CTP 3.1.7.4	Verify transfer of corrupted MSD – PSAP PE eCall.....	170
11.4.18	CTP 3.1.7.5	Verify PSAP behaviour when MSD format check fails– PSAP PE eCall .....	171
11.4.19	CTP 3.1.8	ACK – PSAP PE eCall.....	171
11.4.20	CTP 3.1.9	Route voice and MSD to operator – PSAP PE eCall .....	172

11.4.21	CTP 3.1.10	Display TS12 data and MSD to operator - PSAP PE eCall .....	173
11.4.22	CTP 3.1.11	Decode VIN - PSAP PE eCall.....	174
11.4.23	CTP 3.1.12	Talk to vehicle occupants - PSAP PE eCall.....	175
11.4.24	CTP 3.1.13	Request new MSD before call clear-down - PSAP PE eCall.....	176
11.4.25	CTP 3.1.14.1	Call clear-down - PSAP PE eCall .....	177
11.4.26	CTP 3.1.14.2	Verify status bit in AL-ACK upon clear-down - PSAP -PE eCall .....	178
11.4.27	CTP 3.1.15	Call-back to vehicle - PSAP PE eCall.....	179
11.4.28	CTP 3.1.16	Request new MSD after call clear-down - PSAP PE eCall .....	180
11.5		State transition conformance tests for PSAPs - TPS-eCall.....	181
11.5.1		General.....	181
11.5.2	CTP 3.2.0.1	TPSP - PSAP agreement - PSAP TPS eCall.....	182
11.5.3	CTP 3.2.0.2	Provide areas of responsibility and contact numbers to approved TPSPs -PSAP TPS-eCall.....	183
11.5.4	CTP 3.2.0.3	Agreement on necessary language support - PSAP TPS eCall .....	185
11.5.5	CTP 3.2.0.4	Agree electronic data connection and provide details to approved TPSPs - PSAP TPS eCall .....	186
11.5.6		186	
11.5.7	CTP 3.2.0.5	Provide PSAP data addresses and security access to approved TPSPs - PSAP TPS eCall.....	188
11.5.8	CTP 3.2.1	Receive eCall notification from TPSP (not TS12) -PSAP TPS eCall.....	189
11.5.9	CTP 3.2.2	Route call to operator - PSAP TPS eCall .....	190
11.5.10	CTP 3.2.3	Connection, TSD transmission, display relevant information to PSAP operator -PSAP TPS-eCall .....	191
11.5.11	CTP 3.2.4	PSAP Operator: Talk with TPSP operator and receive relevant information - PSAP TPS eCall .....	193
11.5.12	CTP 3.2.5	Talk to vehicle occupants - PSAP TPS-eCall.....	194
11.5.13	CTP 3.2.6	Request new TSD before call clear-down -PSAP TPS-eCall .....	195
11.5.14	CTP 3.2.7	Inform TPSP that call can be ended - PSAP TPS eCall .....	196
11.5.15	CTP 3.2.8	Call clear-down with TPSP -PSAP TPS-eCall .....	197
11.5.16	CTP 3.2.9	Call-back to TPSP - PSAP TPS-eCall .....	198
11.5.17	CTP 3.2.10	Call-back to vehicle - PSAP TPS eCall .....	199
11.5.18	CTP 3.2.11	Call clear-down with vehicle - PSAP TPS eCall .....	200
12		State transition conformance tests for TPS-eCall.....	201
12.1		Related specifications and conformance requirements .....	201
12.2		TPSP general tests (applicable to both TPS-eCall responder and TPS-eCall notifier) .....	201
12.2.1		General.....	201
12.2.2	CTP 4.0.1	Agree service level agreement and/or Standard ways of working with PSAPs - TPSP.....	203
12.2.3	CTP 4.0.2	Receive PSAP areas of responsibility and contact numbers - TPSP.....	204
12.2.4	CTP 4.0.3	Agree necessary language support - TPSP .....	205
12.2.5	CTP 4.0.4	Agree electronic data connection details with PSAPs - TPSP.....	207
12.2.6	CTP 4.0.5	Evidence quality procedures - TPSP .....	208
12.2.7	CTP 4.0.6	Verify automatic call distribution (ACD) system - TPSP .....	210
12.2.8	CTP 4.0.7	Check link from MNO - TPSP .....	211
12.2.9	CTP 4.0.8	Deal with transmission failures - TPSP .....	211
12.2.10	CTP 4.0.9	Update GIS - TPSP .....	212
12.2.11	CTP 4.0.10	Protection of privacy - TPSP.....	213
12.3		TPS-eCall responder tests - TPS-R.....	214
12.3.1		General.....	214
12.3.2	CTP 4.1.1	Receive TPS-eCall from vehicle - TPS-R .....	215
12.3.3	CTP 4.1.2	Process incoming call - TPS-R.....	218
12.3.4	CTP 4.1.3	Talk with vehicle occupants and receive relevant information - TPS-R.....	220
12.3.5	CTP 4.1.4	Trigger PSAP notification - TPS-R .....	223
12.3.6	CTP 4.1.5	Make voice connection between vehicle and PSAP if required - TPS-R .....	223

12.3.7	CTP 4.1.6	Confirmation received from PSAP that call with vehicle can be ended – TPS-R.....	224
12.3.8	CTP 4.1.7	Call cleardown with vehicle – TPS-R .....	225
12.3.9	CTP 4.1.8	Call-back to vehicle – TPS-R.....	226
12.4	TPS-eCall notifier tests – TPS-N .....		227
12.4.1	General .....		227
12.4.2	CTP 4.2.1	Emergency situation likely to require assistance – TPS-N .....	228
12.4.3	CTP 4.2.2	Establish contact with PSAP – TPS-N.....	228
12.4.4	CTP 4.2.3	Talk with PSAP operator and notify relevant information – TPS-N.....	233
12.4.5	CTP 4.2.4	Establish voice link between PSAP and vehicle occupants if required by PSAP – TPS-N .....	235
12.4.6	CTP 4.2.5	Respond to electronic data update request – TPS-N .....	237
12.4.7	CTP 4.2.6	PSAP informs that call can be ended – TPS-N.....	237
12.4.8	CTP 4.2.7	Call cleardown to PSAP – TPS-N .....	237
12.4.9	CTP 4.2.9	Call-back from PSAP – TPS-N.....	238
13	Marking, labelling and packaging.....		238
14	Declaration of patents and intellectual property .....		238
<b>Annex A (normative) Proforma conformance test report for Pan European eCall in-vehicle system (IVS).....</b>			
A.1	A.1	Conformance test report.....	239
A.2	A.1.1	System under test: .....	239
A.2.1	A.1.2	System under test identification .....	239
A.2.2	A.1.3	Testing environment.....	240
A.2.3	A.1.4	Limits and reservation.....	240
A.2.4	A.1.5	Comments.....	240
A.3	A.2	SUT conformance status .....	241
A.4	A.3	Static conformance summary .....	241
A.5	A.4	Dynamic conformance summary.....	241
A.6	A.5	Static conformance review report.....	242
A.7	A.6	Test campaign report.....	243
A.7.1	A.7	Observations.....	244
<b>Annex B (normative) ProForma conformance test report for Third Party Service Provider In-Vehicle System (TPS-IVS) .....</b>			
B.1	B.1	Conformance test report.....	245
B.2	B.1.1	System under test: .....	245
B.2.1	B.1.2	System under test identification .....	245
B.2.2	B.1.3	Testing environment.....	246
B.2.3	B.1.4	Limits and reservation.....	246
B.2.4	B.1.5	Comments.....	246
B.3	B.2	SUT conformance status .....	247
B.4	B.3	Static conformance summary .....	247
B.5	B.4	Dynamic conformance summary.....	247
B.6	B.5	Static conformance review report.....	248
B.7	B.6	Test campaign report.....	249
B.7.1	B.7	Observations.....	249
<b>Annex C (normative) ProForma conformance test report for mobile network operator (MNO).....</b>			
C.1	C.1	Conformance test report.....	250
C.2	C.1.1	System under test: .....	250
C.2.1	C.1.2	System under test identification .....	250
C.2.2	C.1.3	Testing environment .....	251
C.2.3	C.1.4	Limits and reservation .....	251

C.2.4	C.1.5 Comments.....	251
C.3	C.2 SUT conformance status .....	252
C.4	C.3 Static conformance summary .....	252
C.5	C.4 Dynamic conformance summary.....	252
C.6	C.5 Static conformance review report .....	253
C.7	C.6 Test campaign report .....	254
C.7.1	C.7 Observations.....	254
<b>Annex D (normative) ProForma conformance test report for public service answering point (PSAP) .....</b>		
		255
D.1	D.1 Conformance test report.....	255
D.2	D.1.1 System under test: .....	255
D.2.1	D.1.2 System under test identification .....	255
D.2.2	D.1.3 Testing environment .....	256
D.2.3	D.1.4 Limits and reservation .....	256
D.2.4	D.1.5 Comments .....	256
D.3	D.2 SUT conformance status.....	257
D.4	D.3 Static conformance summary.....	257
D.5	D.4 Dynamic conformance summary .....	257
D.6	D.5 Static conformance review report.....	258
D.7	D.6 Test campaign report.....	259
D.7.1	D.7 Observations .....	260
<b>Annex E (normative) ProForma conformance test report for third party service provider (TPS-eCall) .....</b>		
		261
E.1	E.1 Conformance test report .....	261
E.2	E.1.1 System under test: .....	261
E.2.1	E.1.2 System under test identification .....	261
E.2.2	E.1.3 Testing environment.....	262
E.2.3	E.1.4 Limits and reservation .....	262
E.2.4	E.1.5 Comments.....	262
E.3	E.2 SUT conformance status .....	263
E.4	E.3 Static conformance summary .....	263
E.5	E.4 Dynamic conformance summary.....	263
E.6	E.5 Static conformance review report .....	264
E.7	E.6 Test campaign report .....	265
E.7.1	E.7 Observations.....	265
<b>Bibliography .....</b>		267

## European foreword

This document (EN 16454:2015) 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 March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

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 CEN/TS 16454:2013.

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.

## Introduction

An *eCall* is an emergency call generated either automatically via activation of in-vehicle sensors or manually by the *vehicle occupants*; 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* and carries a defined standardized *minimum set of data*, 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*.

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.

This deliverable provides tests to enable actors in the *eCall* chain to be able to claim conformance to the *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 *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* 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 and cellular mobile networks.

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

## 1 Scope

This European Standard defines the key actors in the eCall chain of service provision as:

- 1) In-Vehicle System (IVS)/vehicle,
- 2) Mobile network Operator (MNO),
- 3) Public safety assistance point [provider](PSAP),

in some circumstances may also involve:

- 4) Third Party Service Provider (TPSP),

and to provide conformance tests for actor groups 1) – 4).

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

This European Standard 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, 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*

EN 16062:2015, *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 16102:2011, *Intelligent transport systems — eCall — Operating requirements for third party support*

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 122 001, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN) [Release 8 or later]*

ETSI TS 122 003, *Digital cellular communications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Circuit Teleservices supported by a Public Land Mobile Network (PLMN) (3GPP TS 22.003 version 12.0.0 Release 12) [Teleservice 12/TC12] /E12]*

**EN 16454:2015 (E)**

ETSI TS 122 011, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Service accessibility (3GPP TS 22.011 version 8.9.0 Release 8)*

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

ETSI TS 122 105, *Universal Mobile Telecommunications System (UMTS); Services and service capabilities (3GPP TS 22.105 version 8.4.0 Release 8)*

ETSI TS 123 107, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Quality of Service (QoS) concept and architecture (3GPP TS 23.107 version 6.4.0 Release 6)*

ETSI TS 123 122, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Non-Access-Stratum (NAS) functions related to Mobile Station (MS) in idle mode (3GPP TS 23.122 version 8.12.0 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*

ETSI TS 126 267, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); eCall data transfer; In-band modem solution; General description [Version 8.6.0 or later]*

NOTE The provisions for eCall in Version 8.6.0 of ETSI TS 126 267 correspond to the provisions for eCall in versions 9.3.0, 10.0.0 and 11.0.0.

ETSI TS 126 269, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); eCall data transfer; In-band modem solution; Conformance testing (Version 8.3.0 or later)*

ETSI TS 127 007, *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; AT command set for User Equipment (UE)*

ETSI TS 131 102, *Universal Mobile Telecommunications System (UMTS); Characteristics of the Universal Subscriber Identity Module (USIM) application (3GPP TS 31.102 version 8.17.0 Release 8)*

ETSI TS 134 123-1, *Universal Mobile Telecommunications System (UMTS); User Equipment (UE) conformance specification; Part 1: Protocol conformance specification (3GPP TS 34.123-1 version 8.6.0)*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**