



Emergency Communications (EMTEL); Accessibility and Interoperability of Emergency Communications

get full document from standards.iteh.ai

Reference

DEN/EMTEL-00067

Keywords

accessibility, emergency communications,
language, location information, PSAP, real-time
text, relay services, roaming, sign language, SIP,
total conversation

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Important notice

The present document can be downloaded from the
[ETSI Search & Browse Standards](#) application.

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format on [ETSI deliver](#) repository.

Users should be aware that the present document may be revised or have its status changed,
this information is available in the [Milestones listing](#).

If you find errors in the present document, please send your comments to
the relevant service listed under [Committee Support Staff](#).

If you find a security vulnerability in the present document, please report it through our
[Coordinated Vulnerability Disclosure \(CVD\)](#) program.

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.
In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2026.
All rights reserved.

Contents

Intellectual Property Rights	7
Foreword.....	7
Modal verbs terminology.....	8
Executive summary	8
Introduction	8
1 Scope	11
2 References	11
2.1 Normative references	11
2.2 Informative references.....	12
3 Definition of terms, symbols and abbreviations.....	14
3.1 Terms.....	14
3.2 Symbols.....	15
3.3 Abbreviations	15
4 Operational Profile	15
5 Architecture of functional entities.....	16
6 Accessible emergency communication	17
6.1 General	17
6.2 Modality and language	18
6.3 User interface and general accessibility	18
6.4 Communication features.....	19
6.4.1 General.....	19
6.4.2 Session control and emergency contextual information	19
6.4.3 Routing	20
6.4.4 Transferred emergency communications	21
6.4.5 Conferencing emergency communications	21
6.4.6 Callback	21
6.5 Communication media	22
6.5.1 General.....	22
6.5.2 Audio	22
6.5.3 Video	22
6.5.4 Real-time text.....	23
6.5.5 Text messaging	23
6.5.6 Total conversation	23
6.6 Relay service invocation in emergency communications by the user	23
6.7 Assisting services in emergency communications	24
7 User equipment requirements.....	24
7.1 General	24
7.2 IMS based user equipment	25
7.2.1 General.....	25
7.2.2 Settings	25
7.2.3 Initiation of emergency communications.....	26
7.2.4 Callback	26
7.2.5 Visiting regions and networks	27
7.2.6 Relay service invocation in emergency communications by the user.....	27
7.3 SIP based user equipment.....	28
7.3.1 General.....	28
7.3.2 Settings	28
7.3.3 Initiation of emergency communications.....	29
7.3.4 Callback	29
7.3.5 Visiting regions and networks	29
7.3.6 Relay service invocation in emergency communications by the user.....	30

7.4	Other technologies for user equipment.....	30
8	Originating service requirements	30
8.1	General	30
8.2	IMS based originating service	31
8.2.1	General.....	31
8.2.2	Settings	31
8.2.3	Initiation of emergency communications.....	32
8.2.4	Callback.....	32
8.2.5	Visiting regions and networks	32
8.2.6	Relay service invocation requested by the user in emergency communication	33
8.3	SIP based originating service	33
8.3.1	General.....	33
8.3.2	Settings	33
8.3.3	Initiation of emergency communications.....	34
8.3.4	Callback	34
8.3.5	Visiting regions and networks	34
8.3.6	Relay service invocation requested by the user in emergency communication	35
8.4	Other technologies for emergency communication.....	35
8.4.1	General.....	35
8.4.2	Conversion to ETSI TS 103 479 emergency communication interfaces.....	36
8.4.3	Use of ETSI TS 103 479 together with PEMEA	36
8.4.3.1	General	36
8.4.3.2	Initiating emergency communication with PEMEA support	36
8.4.3.3	Emergency communications by IMS in regions without PEMEA support.....	36
8.4.3.4	Emergency communications by SIP in regions without PEMEA support	37
8.4.3.5	Accessibility related details in use of PEMEA.....	37
9	Emergency communications system requirements	37
9.1	General	37
9.2	Media.....	37
9.3	Modality and language indication	38
9.4	Routing.....	38
9.5	Bridging.....	39
9.6	Callback.....	39
9.7	Communications handling.....	40
9.8	Considerations for PSAPs	40
9.8.1	General.....	40
9.8.2	LoST server for routing to PSAPs	40
9.8.3	Language capabilities and inclusion of assisting services	41
9.8.4	Sign language handling.....	41
10	Relay service and other assisting services.....	41
11	Information provision requirements	42
11.1	General on information	42
11.2	Accessible information formats (informative).....	42
11.2.1	Accessible information in digital format	42
11.2.2	Accessible information in non-digital format	43
11.2.3	Accessible information by support services.....	43
11.3	Contents of information about products involved in emergency communications.....	43
11.3.1	Instructions for installation and maintenance	43
11.3.2	Instructions for use.....	43
11.3.3	Description of user interface	43
11.3.4	Information about product functionality	44
11.3.5	Information about interface to assistive technology	45
11.4	Contents of information about services involved in emergency communications	45
11.5	Contents of information about services for the assessment of their accessibility.....	46
Annex AA (informative):	Relationship between the present document and the essential requirements of Directive (EU) 2019/882	47

Annex AB (informative):	Relationship between the present document and the essential requirements of other Directives according to Directive 2019/882 Section VI of Annex I.....	51
Annex B (normative):	Testing for compliance with technical requirements.....	54
B.1	Introduction	54
B.2	Specific concerns when testing emergency communications.....	54
B.3	Testing methods	54
B.4	Operational scenarios for testing.....	55
B.4.1	Introduction of operational scenarios for testing	55
B.4.2	Set of operational scenarios for testing.....	55
B.5	Architecture of functional entities.....	55
B.6	Accessible emergency communication	56
B.6.1	General (informative).....	56
B.6.2	Modality and language	56
B.6.3	User interface and general accessibility	58
B.6.4	Communication Features.....	60
B.6.4.1	General.....	60
B.6.4.2	Session control and emergency contextual information	60
B.6.4.3	Routing	62
B.6.4.4	Communication transfer	64
B.6.4.5	Conferencing.....	65
B.6.4.6	Callback	66
B.6.5	Communication media	68
B.6.5.1	General.....	68
B.6.5.2	Audio	68
B.6.5.3	Video	69
B.6.5.4	Real-time text.....	70
B.6.5.5	Text messaging	71
B.6.5.6	Total conversation	71
B.6.6	Relay service invocation in emergency communications by the user	72
B.6.7	Assisting services in emergency communications	73
B.7	User equipment	74
B.7.1	General	74
B.7.2	IMS based user equipment	75
B.7.2.1	General.....	75
B.7.2.2	Settings	76
B.7.2.3	Initiation of emergency communications.....	77
B.7.2.4	Callback	77
B.7.2.5	Visiting regions and networks	78
B.7.2.6	Relay service invocation in emergency communications by the user.....	78
B.7.3	SIP based user equipment.....	79
B.7.3.1	General.....	79
B.7.3.2	Settings	80
B.7.3.3	Initiation of emergency communications.....	81
B.7.3.4	Callback	81
B.7.3.5	Visiting regions and networks	81
B.7.3.6	Relay service invocation in emergency communications by the user.....	82
B.7.4	Other technologies for emergency communication.....	82
B.8	Originating service	83
B.8.1	General	83
B.8.2	IMS based originating service	84
B.8.2.1	General.....	84
B.8.2.2	Settings	84
B.8.2.3	Initiation of emergency communications.....	85
B.8.2.4	Callback	85

B.8.2.5	Visiting regions and networks	86
B.8.2.6	Relay service invocation in emergency communications by the user.....	86
B.8.3	SIP Based originating service.....	87
B.8.3.1	General.....	87
B.8.3.2	Settings	87
B.8.3.3	Initiation of emergency communications.....	88
B.8.3.4	Callback	88
B.8.3.5	Visited region.....	88
B.8.3.6	Relay service invocation in emergency communications by the user.....	89
B.8.4	Other technologies for emergency communication.....	90
B.8.4.1	General.....	90
B.8.4.2	Conversion to ETSI TS 103 479 emergency communication interfaces.....	91
B.8.4.3	Use of ETSI TS 103 479 together with PEMEA	91
B.8.4.3.1	General	91
B.8.4.3.2	Initiating emergency communication with PEMEA support	92
B.8.4.3.3	Emergency communications by IMS in regions without PEMEA support.....	92
B.8.4.3.4	Emergency communications by SIP in regions without PEMEA support	93
B.8.4.3.5	Accessibility related details in use of PEMEA.....	93
B.9	Emergency communications system including PSAP.....	94
B.9.1	General	94
B.9.2	Media.....	94
B.9.3	Modality and language indication	95
B.9.4	Routing.....	96
B.9.5	Bridging.....	97
B.9.6	Callback.....	98
B.9.7	Communications handling.....	99
B.9.8	Considerations for PSAP.....	99
B.9.8.1	General.....	99
B.9.8.2	LoST Server for routing to PSAPs.....	99
B.9.8.3	Call taker's language capabilities and inclusion of assisting services	100
B.9.8.4	Sign language handling.....	101
B.10	Relay service and other assisting services.....	102
B.11	Information.....	102
B.11.1	General on information	102
B.11.2	Accessible format of information	103
B.11.3	Contents of information about products involved in emergency communications.....	103
B.11.3.1	Instructions for installation and maintenance	103
B.11.3.2	Instructions for use.....	103
B.11.3.3	Description of user interface	103
B.11.3.4	Information about product functionality	103
B.11.3.5	Information about interface to assistive technology	104
B.11.4	Contents of information about services involved in emergency communications	104
B.11.5	Contents of information about services for the assessment of their accessibility.....	104
Annex C (informative):	User Level Use Cases	105
C.1	Introduction	105
C.2	Users with mobile phones with voice and RTT	105
C.3	Users with mobile phones with total conversation.....	106
C.4	Users with app or web based total conversation	106
Annex D (informative):	Cross references between requirements labels and clauses	108
Annex E (informative):	Emergency communications use by persons with disabilities.....	112
History		113

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the [ETSI IPR online database](#).

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™**, **LTE™** and **5G™** logo are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

Foreword

This Harmonised European Standard (EN) has been produced by ETSI Special Committee Emergency Communications (EMTEL).

The present document has been prepared under the Commission's standardisation request C(2022) 6456 final [i.1] to provide one voluntary means of conforming to the essential requirements of Directive (EU) 2019/882 on the accessibility requirements for products and services [i.3].

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table AA.1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding requirements of that Directive and associated EFTA regulations.

National transposition dates	
Date of adoption of this EN:	20 May 2026
Date of latest announcement of this EN (doa):	31 August 2026
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	28 February 2027
Date of withdrawal of any conflicting National Standard (dow):	29 February 2028

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Executive summary

Accessible emergency communications are needed to provide equal opportunities for all persons to get assistance in emergency situations. The present document specifies technical, and accessibility means to provide accessible emergency communications. The communications environment is based on packet switched communications technologies, and ETSI TS 103 479 [2] specifies the details for emergency communications. The present document requires a set of functions to ensure access to other media than voice, namely real-time text and video, additional functions such as text messaging and access to assisting services are also specified.

When voice, video and real-time text are provided together, the communication is called total conversation and makes communication more accessible than voice communication.

Video is commonly used for sign language communication. The provision of total conversation in emergency communications enables rapid and fluent emergency communications for sign language users, when competence in the sign language favoured by the user in emergency can be provided. In many cases, interpreters need to be invoked in the communication in a three-party fashion. The present document tells which technical solutions are to be implemented to support such interaction.

Technical details are provided for SIP based technologies, in particular communication services known as IMS and SIP based VoIP. Since the intention is that users shall be able to request emergency assistance through efficient emergency communications anywhere in Europe, it is essential that communication interoperability is established for travelling users. That requires few and well specified interfaces for the communication. Openings for emergency apps and other technologies are briefly mentioned. The present document describes these interfaces, which are consistent with the default interoperability solutions prescribed in EN 301 549 [1], clause 6, enhancing them with the specific requirements needed for accessible emergency communications.

General accessibility requirements are specified in EN 301 549 [1].

Introduction

When communication is made accessible for persons they are provided with accessible complements in communications. This may be done in the communication media, where real-time text and video are accessible complements for voice in various situations. Larger fonts and a spoken user interface are also used as complements to regular visual user interfaces.

The emergency communications related requirements on accessible electronic communications are specified in the present document, including media and technical details for interoperability in emergency communication situations as well as addressing, routing, and providing location information and other contextual information. The inclusion of relay services and other assisting services during emergency communication is also covered.

General accessibility requirements on emergency communications as well as everyday communications including media performance aspects, functional details of the accessible media and general user interface requirements for accessibility are specified in EN 301 549 [1].

The present document presents in clause 4 the operational profile concept for expressing a scope for the requirements. Clause 5 of the present document provides a symbolic technical architecture with the division in the components involved in emergency communications from user terminal to PSAP.

In clause 6 the functional accessibility and interoperability requirements are expressed, in most cases on the whole chain involved in an emergency communication.

Clauses 7 through 10 show how these different parts of the emergency communications chain fulfil their requirements when providing accessible and interoperable emergency communications, referring to the functional requirements of clause 6 by a set of labels for requirements established in clause 6, and cross referenced in Annex D.

The division between clauses 7 through 10 is:

- Clause 7: user equipment requirements.
- Clause 8: originating service requirements.
- Clause 9: emergency communications system including PSAP.
- Clause 10: assisting services.

Clause 11 contains the requirements on provision and contents of information.

The annexes contain the following:

- Annex AA provides a table showing how the essential requirements of Directive (EU) 2019/882 [i.3] regarding the emergency communications are addressed in the present document.
- Annex AB provides a table showing how requirements from other directives relate to the clauses of the present document according to EAA Annex I, Section VI.
- Annex B is a normative annex that sets out sufficient means to determine conformance with the requirements by tests.
- Annex C is a collection of user level use cases.
- Annex D is a cross reference list between requirement labels and clauses.
- Annex E is background information about the communication situation for persons with disabilities.

The present document is one of a set of documents related to Directive (EU) 2019/882 of the European Parliament and of the Council on the accessibility requirements for products and services [i.3] (EAA), developed under the Commission's standardisation request C(2022) 6456 final [i.1] (M/587). The documents in the set are interrelated and together are intended to provide a full coverage of the essential requirements of the EAA.

The present document is limited to cover accessible and interoperable emergency communications and answering emergency communications to demonstrate compliance with the relevant essential requirements of Annex I of the EU Directive 2019/882 [i.3] (EAA), covering the following parts of the EAA:

- Annex I Section III: General accessibility requirements regarding services involved in emergency communications and answering of emergency communications. The services being real-time bidirectional communication services intended for emergency communications, the services answering emergency communications, and assisting services intended to facilitate emergency communications (mainly relay services). The requirements on provision of information about services and products to be used in service provision are limited to the requirements on provision and contents of information and cover:
 - Annex I Section I. 1 (b): Requirements on the provision of, and contents of information about products used by users for access to emergency communications, limited to what is specific for that use.
 - Annex I Section I. 2 (o)(iii): consumer terminal equipment with interactive computing capability, used for the provision of electronic communications services and to be enabled for emergency communications, regarding their accessibility and involvement in emergency communications as referenced from Annex I, Section III (a).
 - Annex I Section II (b): provision and contents of instructions about products' use in emergency communications as referenced from Annex I, Section III (a).

The present document does not cover requirements for making information formats accessible.

- Annex I Section IV (a) iii: Electronic communications services, including emergency communications, limited to what is specific for provision of emergency communications.

- Annex I Section V: Specific accessibility requirements regarding the answering of emergency communications by the most appropriate PSAP.

Additionally:

- the mapping of requirements set out in other Union acts to requirements of the present document is provided as required by Annex I Section VI.
- Requirements for provision and contents of information on how the service meets the accessibility requirements for emergency communications, how the service for emergency communications is delivered and monitored, including how users can issue complaints, as required by Annex V.

The other documents related to Directive (EU) 2019/882 of the European Parliament and of the Council on the accessibility requirements for products and services [i.3] (EAA), are described in and developed under the Commission's standardisation request C(2022) 6456 final [i.1] (M/587).

Sample Document

get full document from standards.iteh.ai

1 Scope

The present document specifies accessibility and interoperability characteristics for the following types of products and services when used in emergency communications. They form together a chain of items involved in accessible emergency communications:

- Communication terminals used in electronic communications
- Electronic communication services
- Emergency communications systems including PSAPs
- Assisting services used in electronic communication services (relay services, language translation services, expert services)

The present document addresses technical aspects of interoperability between user equipment, originating services and emergency communications systems, and the interoperability and functionality required to be able to route emergency communications to the most appropriate PSAP and include assisting services when required. It specifies interoperable and accessible emergency communications, which incorporates voice, video, and real-time text.

Focus is on SIP and IMS technologies for user equipment and originating services, and SIP technology for the emergency communications systems. Brief information is provided on how to arrange emergency communications access also for other technologies.

General accessibility requirements on emergency communications as well as everyday communications including media performance aspects, functional details of the accessible media and general user interface requirements for accessibility are specified in EN 301 549 [1].

NOTE: The relationship between the present document and essential requirements of Directive (EU) 2019/882 [i.3], Annex I and Annex V is given in Annex AA and Annex AB.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found in the [ETSI docbox](#).

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long-term validity.

The following referenced documents are necessary for the application of the present document.

- [1] [EN 301 549 \(V4.1.1\)](#): "Accessibility requirements for ICT products and services", jointly produced by ETSI/CEN/CENELEC.
- [2] [ETSI TS 103 479 \(V1.3.1\) \(09-2025\)](#): "Emergency Communications (EMTEL); Core elements for network independent access to emergency services".
- [3] [ETSI TS 103 698 \(V1.1.1\) \(12-2020\)](#): "Emergency Communications (EMTEL); Lightweight Messaging Protocol for Emergency Service Accessibility (LMPE)".
- [4] [ETSI TS 122 101 \(V18.6.0\) \(05-2024\)](#): "Universal Mobile Telecommunications System (UMTS); LTE; 5G; Service aspects; Service principles (3GPP TS 22.101 version 18.6.0 Release 18)".

- [5] [ETSI TS 122 173 \(V18.0.1\) \(05-2024\)](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; IP Multimedia Core Network Subsystem (IMS) Multimedia Telephony Service and supplementary services; Stage 1 (3GPP TS 22.173 version 18.0.1 Release 18)".
- [6] [ETSI TS 123 167 \(V19.1.1\) \(07-2025\)](#): "Universal Mobile Telecommunications System (UMTS); LTE; IP Multimedia Subsystem (IMS) emergency sessions (3GPP TS 23.167 version 19.1.1 Release 19)".
- [7] [ETSI TS 124 229 \(V19.3.0\) \(07-2025\)](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 (3GPP TS 24.229 version 19.3.0 Release 19)".
- [8] [ETSI TS 126 114 \(V18.9.0\) \(01-2025\)](#): "Universal Mobile Telecommunications System (UMTS); LTE; 5G; IP Multimedia Subsystem (IMS); Multimedia telephony; Media handling and interaction (3GPP TS 26.114 version 18.9.0 Release 18)".
- [9] [Recommendation ITU-T H.264 \(08/24\)](#): "Advanced video coding for generic audiovisual services".
- [10] [Recommendation ITU-T G.722 \(09/12\)](#): "7 kHz audio-coding within 64 kbit/s".
- [11] [Recommendation ITU-T T.140 \(02/98\)](#): "Protocol for multimedia application text conversation" (including its Addendum 1).

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long-term validity.

The following referenced documents may be useful in implementing an ETSI deliverable or add to the reader's understanding, but are not required for conformance to the present document.

- [i.1] [C\(2022\)6456 final](#) Commission Implementing Decision of 14.9.2022 on a standardisation request to the European standardisation organisations as regards the accessibility requirements of products and services in support of Directive (EU) 2019/882 of the European Parliament and of the Council.
- [i.2] [Directive \(EU\) 2018/1972](#) of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code.
- [i.3] [Directive \(EU\) 2019/882](#) of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services.
- [i.4] [Commission Delegated Regulation \(EU\) 2023/444](#) of 16 December 2022 supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council with measures to ensure effective access to emergency services through emergency communications to the single European emergency number '112'.
- [i.5] [ETSI TS 101 470 \(V1.2.1\)](#): "Emergency Communications (EMTEL); Total Conversation Access to Emergency Services".
- [i.6] [ETSI TS 122 228 \(V19.0.0\)](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Service requirements for the Internet Protocol (IP) multimedia core network subsystem (IMS); Stage 1 (3GPP TS 22.228 version 19.0.0 Release 19)".
- [i.7] [ETSI TS 103 478 \(V1.3.1\)](#): "Emergency Communications (EMTEL); Pan-European Mobile Emergency Application".

- [i.8] [ETSI TS 103 755 \(V1.1.1\)](#): "Emergency Communications (EMTEL); PEMEA ESInet Shared Services".
- [i.9] [ETSI TS 103 871 \(V1.2.1\)](#): "Emergency Communications (EMTEL); PEMEA Real-Time Text Extension".
- [i.10] [ETSI TS 103 872 \(V1.1.1\)](#): "Emergency Communications (EMTEL); PEMEA Service Discovery Extension".
- [i.11] [ETSI TS 103 945 \(V1.1.1\)](#): "Emergency Communications (EMTEL); PEMEA Audio Video Extension".
- [i.12] [ETSI ES 202 667 \(V1.1.5\)](#): "Speech and multimedia Transmission Quality (STQ); Audiovisual QoS for communication over IP networks".
- [i.13] [ETSI ES 204 009 \(V1.1.1\)](#): "Human Factors (HF); Requirements for interoperable total conversation services".
- [i.14] [IETF RFC 3261 \(2002\)](#): "Session Initiation Protocol (SIP)", Rosenberg J., et al.
- [i.15] [IETF RFC 3550 \(2003\)](#): "RTP: A Transport Protocol for Real-Time Applications", H. Schulzrinne et al.
- [i.16] [IETF RFC 3840 \(2004\)](#): "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)", Rosenberg J., et al.
- [i.17] [IETF RFC 3841 \(2004\)](#): "Caller Preferences for the Session Initiation Protocol (SIP)", Rosenberg J., et al.
- [i.18] [IETF RFC 4103 \(2005\)](#): "RTP Payload for Text Conversation".
- [i.19] [IETF RFC 4575 \(2006\)](#): "A Session Initiation Protocol (SIP) Event Package for Conference State".
- [i.20] [IETF RFC 4579 \(2006\)](#): "Session Initiation Protocol (SIP) Call Control - Conferencing for User Agents", Johnston A., Levin O.
- [i.21] [IETF RFC 4596 \(2006\)](#): "Guidelines for Usage of the Session Initiation Protocol (SIP) Caller Preferences Extension", Rosenberg J., Kyzivat P.
- [i.22] [IETF RFC 7090 \(2014\)](#): "Public Safety Answering Point (PSAP) Callback", Schulzrinne H., et al.
- [i.23] [IETF RFC 7852 \(2016\)](#): "Additional Data Related to an Emergency Call", Gellens R., Tschofenig H., Rosen B., Marschall R., Winterbottom J.
- [i.24] [IETF RFC 8373 \(2018\)](#): "Negotiating Human Language in Real-Time Communications", Gellens R.
- [i.25] [IETF RFC 8866 \(2021\)](#): "SDP Session Description Protocol", Began A., et al.
- [i.26] [IETF RFC 9071 \(2021\)](#): "RTP-Mixer Formatting of Multiparty Real-Time Text".
- [i.27] [ISO 9241-11:2018](#): "Ergonomics of human-system interaction; Part 11: Usability: Definitions and concepts".
- [i.28] [ETSI ES 202 975](#): "Human Factors (HF); Requirements for relay services".

3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the following terms apply:

accessibility: extent to which products, systems, services, environments, and facilities can be used by people from a population with the widest range of user needs, characteristics, and capabilities, to achieve identified goals in identified contexts of use (from ISO 9241-11:2018 [i.27])

NOTE 1: Context of use includes direct use or use supported by assistive technologies.

NOTE 2: The context in which the ICT is used may affect its overall accessibility. This context could include other products and services with which the ICT may interact.

assisting service: service invoked during a communication, assisting the user or the call taker with specific tasks in the communication

NOTE: Typical examples of assisting services are relay services and language translation services.

assistive technology: any item, piece of equipment, service or product system including software that is used to increase, maintain, substitute, or improve functional capabilities of persons with disabilities or for, alleviation and compensation of impairments, activity limitations or participation restrictions

audio: all signals that are audible to human beings, including speech and music [i.12]

emergency communication: communication by means of interpersonal communications services between an end-user and the PSAP with the goal to request and receive emergency relief from emergency services [i.2]

emergency communications system: interconnected packet-switched network, including one or more PSAPs for emergency communication handling and additional functions such as emergency communication routing

NOTE: This interconnected network is also referred to in technical standards as the Emergency Services IP Network (ESInet). In European regulation it is also referred to as "PSAP domain" [i.4].

Forest Guide: special instance of a LoST server within an emergency communications system enabling mapping service entities to find routing information that lies outside their own domain

initiation of emergency communication: transactional process defined by sending a request to address emergency communications and subsequently receiving a final response

NOTE: This sequence explicitly establishes a technical agreement on resource allocation and media capabilities, thereby creating a connection between two endpoints that is necessary for media transmission.

interpersonal communications service: service normally provided for remuneration that enables direct interpersonal and interactive exchange of information via electronic communications networks between a finite number of persons, whereby the persons initiating or participating in the communication determine its recipient(s) and does not include services which enable interpersonal and interactive communication merely as a minor ancillary feature that is intrinsically linked to another service [i.2]

modality: way in which communication is perceived or is expressed

NOTE: The most valid examples for the present document are signed (= using sign language), written and spoken modalities.

most appropriate PSAP: PSAP established by responsible authorities to cover emergency communications from a certain area or for emergency communications of a certain type

Public Safety Answering Point (PSAP): physical location where an emergency communication is first received under the responsibility of a public authority or a private organization recognized by the Member State [i.2]

Real-Time Text (RTT): form of text conversation in point-to-point situations or in multipoint conferencing where the text being entered is sent in such a way that the communication is perceived by the user as being continuous on a character-by-character basis

speech: oral production of information by a human being [i.12]

total conversation: bidirectional symmetric real time transfer of motion video, real-time text and voice between users in two or more locations

user equipment: combined hardware and software used by a user

user initiation of emergency communication: human action of initiating emergency communications through the UE by dialling "112", selecting an emergency contact, pressing a dedicated button, or other action (including audio or visual command)

voice: oral production of information by a human being

NOTE: The terms voice and speech are synonyms. The media type for speech is called "audio" in SDP.

3.2 Symbols

Void.

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

3GPP	3 rd Generation Partnership Project
AEC	Accessible Emergency Communication
EAA	European Accessibility Act
EFTA	European Free Trade Area
EU	European Union
GTT	Global Text Telephony

NOTE: GTT is equivalent to RTT in general including circuit switched variants with lower performance than for current RTT requirements.

GTT-IP Global Text Telephony - Internet Protocols

NOTE: GTT-IP is equivalent to IP based RTT meeting all requirements on RTT.

ICT	Information and Communications Technology
IMS	IP-Multimedia Subsystem
IP	Internet Protocols
LoST	Location to Service Translation
LTE	Long Term Evolution
MTSI	Multimedia Telephony Service for IMS
PEMEA	Pan-European Mobile Emergency Application
PLMN	Public Land Mobile Network
PSAP	Public Safety Answering Point
RTP	Real Time Protocol
RTT	Real-Time Text
SDP	Session Description Protocol
SIP	Session Initiation Protocol
UE	User Equipment
VoIP	Voice over IP

4 Operational Profile

The technical requirements of the present document apply under the operational profile for the equipment and services, which shall be in accordance with the requirements of the present document and its intended use, but as a minimum, shall be that specified in the applicable operational scenarios for testing contained in clause B.4.2 of the present document. The equipment and services shall comply with all the technical requirements of the present document when operating within the boundary limits of the operational profile defined by its intended use.