



**Human Factors (HF);
Requirements for relay services**

STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/966d3766-6517-499d-ac99-dc1cb7c96e6b/etsi-es-202-975-v2.1.1-2015-09



Reference

RES/HF-00155

Keywords

accessibility, HF, ICT, procurement, relay, service

CENAvenue Marnix 17
B-1000 Brussels - BELGIUMTel: + 32 2 550 08 11
Fax: + 32 2 550 08 19**CENELEC**Avenue Marnix 17
B-1000 Brussels - BELGIUMTel.: +32 2 519 68 71
Fax: +32 2 519 69 19**ETSI**650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCETel.: +33 4 92 94 42 00
Fax: +33 4 93 65 47 16Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88**Important notice**

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

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 only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>**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.

© European Telecommunications Standards Institute 2015.

© Comité Européen de Normalisation 2015.

© Comité Européen de Normalisation Electrotechnique 2015.

All rights reserved.

DECT™, PLUGTESTS™, UMTS™ and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members. 3GPP™ and LTE™ are Trade Marks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

Contents

Contents	3
Intellectual Property Rights	6
Foreword	6
Modal verbs terminology	6
Introduction	6
1 Scope	7
2 References	7
2.1 Normative references	7
2.2 Informative references	7
3 Definitions and abbreviations	8
3.1 Definitions	8
3.2 Abbreviations	9
4 General information on relay services	10
4.1 A relay service	10
4.2 Service types	11
4.3 Relay service provision	11
4.4 Service hours	11
4.5 Supplementary services	11
4.6 Development directions	12
5 Relay service requirements	12
5.1 Text relay services	12
5.1.1 Text/speech conversion	12
5.1.2 Call set up	12
5.1.3 Talk through	13
5.1.4 General	13
5.2 Speech to speech relay services	13
5.2.1 Speech to speech service	13
5.2.2 Call set up	13
5.2.3 General	13
5.3 Video relay services	13
5.3.1 Sign language/speech conversion	13
5.3.2 Sign/text conversion	13
5.3.3 Call set up	13
5.3.4 Talk through	14
5.3.5 Text communication	14
5.3.6 General	14
5.4 Captioned telephony services	14
5.4.1 Speech to text conversion	14
5.4.2 Talk through	14
5.4.3 Call set up	14
5.4.4 General	15
6 Relay service provision	15
6.1 Organization plan	15
6.2 Quality assurance	15
6.3 Opening hours	15
6.3.1 24-hour service	15
6.3.2 Limited-hour service	15
6.4 Answering times	15
6.5 Queue situations	16
6.6 Call restrictions	16
6.7 Hold	16
6.7.1 General	16

6.7.2	Handling of queue situations at the call destination end	16
6.8	Traffic recording	16
6.8.1	Service performance monitoring	16
6.8.2	Call performance monitoring	16
6.9	Billing	16
6.10	Lawful interception	17
6.11	System reliability	17
6.11.1	Availability	17
6.11.2	Service performance management	17
6.11.3	Error messages	17
6.11.4	Disaster recovery plan	17
6.12	Transmission quality	17
6.13	Call addressing and service invocation	18
6.14	Interacting relay services	18
6.15	Emergency service access	18
6.16	Answering machine facility called by a primary user using a relay service	18
6.17	Answering machine facility in relayed calls to primary users	19
6.18	Directory enquiry	19
6.19	Remote interpreting	19
6.20	Provision of CLI information	19
7	Communications assistant (including sign language interpreter) aspects	19
7.1	Communications assistants and sign language interpreters	19
7.2	Proficiency requirements	19
7.3	Procedures	19
7.3.1	Information	19
7.3.2	Freedom from bias	20
7.3.3	Assistance	20
7.3.4	Sign language interpreters' code of practice	20
7.3.5	Neutrality	20
7.3.6	Accuracy	20
7.4	Confidentiality	20
7.4.1	Content disclosure	20
7.4.2	Secrecy	20
7.4.3	Privacy	20
7.4.4	Emergencies	20
7.5	Calls to stored voice services	20
7.5.1	Interactive services	20
7.5.2	Access to on-line information, data and services through a voice call	21
7.6	Profanity, obscenity and illegality	21
7.6.1	Profanity and obscenity in conversations	21
7.6.2	Obscenity directed to the communications assistant	21
7.6.3	Illegality	21
7.7	Language	21
7.8	Training requirements	21
7.9	Counselling	21
7.10	Working conditions	22
8	User aspects	22
8.1	Accessibility of the means of access to the service	22
8.2	Complaints handling	22
8.3	User information	22
8.4	Technical information	22
8.5	Testing facilities	22
9	Interoperability with end user products and services	23
Annex A (informative): Interoperability		24
A.1	General	24
A.2	Media specifications	24
A.2.1	Audio	24
A.2.2	Real-time text	24
A.2.3	Video	24

A.3	Web access.....	25
A.4	Relay service provision and access.....	25
A.5	Access for ICT unsupported by the relay service	25
A.6	General principles for selecting between protocols and calling mechanisms	25
Annex B (informative): Call setup		26
B.1	General.....	26
B.1.1	Main methods and their attributes	26
B.1.2	Three-step calling.....	26
B.1.3	One-step calling	26
Annex C (informative): Provision of supplementary services		30
C.1	Supplementary services of relevance to relay services	30
C.1.1	General.....	30
C.1.2	Calling Line Identification Presentation (CLI/CLIP).....	30
C.1.3	Connected Line Identification Presentation (COLP).....	30
C.1.4	Message waiting indication.....	30
C.1.5	Call progress information.....	30
History.....		31

iTeh STANDARD PREVIEW
 (standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/966d3766-6517-499d-ac99-dc1cb7c96e6b/etsi-es-202-975-v2.1.1-2015-09>

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is 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 Web server (<http://ipr.etsi.org>).

Pursuant to the ETSI IPR Policy, no investigation, 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.

Foreword

This final draft ETSI Standard (ES) has been produced by ETSI Technical Committee Human Factors (HF), and is now submitted for the ETSI standards Membership Approval Procedure.

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.

Introduction

The present document is an update of previously published versions and is based on ETSI TR 101 806 [i.4].

Further significant background and research information about relay services and the development of the original version of the present document can be found in ETSI TR 102 974 [i.1].

Recent development in the area has been taken into careful consideration.

The present document is intended to support the procurement and provision of accessible and usable relay services.

1 Scope

The present document specifies requirements for relay services provided over ICT networks. It is intended to give information suitable for incorporation into contracts between commissioning agents and relay service providers.

The present document is applicable to all kinds of relay services which enable a user with functional limitations related to hearing, vision, speech or cognitive functions, or combinations thereof, to converse with other users. The present document applies to text relay services, speech-to-speech relay services, video relay services, and captioned telephony services.

Requirements are specified for services provided on a 24/7 basis, as well as for limited-hour services.

The present document does not place requirements on network operators.

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 reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

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] ETSI EN 301 549 (V1.1.2): "Accessibility requirements suitable for public procurement of ICT products and services in Europe".
- [2] Recommendation ITU-T F.700: "Framework Recommendation for multimedia services".
- [3] Recommendation ITU-T H.Sup1: "Application profile - Sign language and lip-reading real-time conversation using low bit-rate video communication".

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 reference 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 are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI TR 102 974: "Human Factors (HF); Telecommunications relay services".
- [i.2] ETSI EG 201 013: "Human Factors (HF); Definitions, abbreviations and symbols".
- [i.3] ETSI EG 202 320 (V1.2.1): "Human Factors (HF); Duplex Universal Speech and Text (DUST) communications".
- [i.4] ETSI TR 101 806 (V1.1.1): "Human Factors (HF); Guidelines for Telecommunication Relay Services for Text Telephones".
- [i.5] ETSI TR 102 202 (V1.1.2): "Human Factors (HF); Human Factors of work in call centres".

- [i.6] ETSI TS 101 470 (V1.1.1): "Emergency Communications (EMTEL); Total Conversation Access to Emergency Services".
- [i.7] ETSI TS 102 657 (V1.16.1): "Lawful Interception (LI); Retained data handling; Handover interface for the request and delivery of retained data".
- [i.8] ETSI ES 201 158 (V1.2.1): "Telecommunications security; Lawful Interception (LI); Requirements for network functions".
- [i.9] ETSI EG 202 116 (V1.1.1): "Human Factors (HF); Guidelines for ICT products and services; "Design for All"".
- [i.10] Recommendation ITU-T F.703: "Multimedia conversational services".
- [i.11] BT SIN 359: "Text Relay Service description".
- NOTE: Available at <http://www.sinet.bt.com/sinet/SINs/pdf/359v1p4.pdf>.
- [i.12] Void.
- [i.13] United Nations: "Convention on the rights of persons with disabilities and optional protocol".
- NOTE: Available at <http://www.un.org/disabilities/default.asp?id=150>.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ETSI EG 201 013 [i.2] and the following apply:

captioned telephony: service that assists a deaf or hard of hearing user in a spoken dialogue by providing text captions translating the incoming voice part of the conversation to text

NOTE: The service is usually provided through a device with Internet connection capability.

commissioning agent: person or body that procures a relay service from a service provider by means of a purchasing contract

Communications Assistant (CA): person working in a relay service with media conversion, as a human intermediary (including sign language interpreters for video relay services)

NOTE: Also known as and sometimes called interpreter, operator, call handler, telephone operator, etc.

ICT network: technology and resources supporting the connection and operation of interconnected ICT

Information and Communication Technology (ICT): technology, equipment, or interconnected system or subsystem of equipment for which the principal function is the creation, conversion, duplication, automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, reception, or broadcast of data or information

NOTE: Examples of ICT are electronic content, telecommunications products, computers and ancillary equipment, software, information kiosks and transaction machines, videos, IT services, and multifunction office machines which copy, scan, and fax documents.

interacting relay services: relay services connected through a common voice path, in order to provide connectivity and modality translation between two (or several) primary relay service users

lost call: call that cannot be serviced as expected by the users, for reasons internal to the service and outside of control of the users

national numbering plan: scheme that structures the numbers used and the number space available in a country

primary (relay service) user: intended (target) user of a relay service who needs some communication modality conversion support in order to communicate with voice users

NOTE: A primary user can initiate and receive calls.

real-time text: form of text conversation in point-to-point situations or in multipoint conferencing where the text being entered is displayed in such a way that the communication is perceived by the user as being continuous

relay service: electronic communications service that enables users of different modes of communication (e.g. text, sign or speech) to interact by providing conversion between different modes of communication, usually through a communications assistant

relay service user: primary or secondary user of a relay service

secondary (relay service) user: persons other than primary users, using the relay service for communication with primary users

NOTE: A secondary user can initiate and receive a relayed call.

signing: See "video relay service".

sign language interpreter: person working in a video relay service with sign language interpretation

NOTE: Also called "interpreter".

Signing relay service: See "video relay service".

speech to speech relay service: electronic communications service that enables speech impaired telephone users and other users to interact by providing skilled assistance between them

NOTE: This assistance is provided by a trained communications assistant.

text relay service: electronic communications service that enables text capable terminal users and voice terminal users to interact by providing conversion between the two modes of communication in substantially real time

NOTE: This conversion is normally provided by a communications assistant.

text telephone: terminal offering text telephony functions, either as a stand-alone unit or as an addition to a voice telephone or as an application in a multi-function computer based terminal (ETSI EG 201 013 [i.2])

text telephony: telecommunications facility offering real time text conversation through telecommunication networks

NOTE: Text telephony may be combined with voice telephony (ETSI EG 201 013 [i.2]).

text capable terminal: communication device with the capability to use real-time text and optionally, other media in conversational calls

total conversation: audio-visual conversation service providing bidirectional symmetric real-time transfer of motion video, text and voice between users in two or more locations (Recommendation ITU-T F.703 [i.10])

videophone: device capable of supporting audio-visual conversation providing bidirectional symmetric real-time transfer of voice and motion video between two locations

NOTE: Bidirectional text transfer is an optional videophone feature.

Video Relay Service (VRS): service that enables sign language users and other users to interact by providing conversion between sign language and speech in substantially real time

NOTE: This conversion is normally provided by a sign language interpreter (this service is also known as "sign relay service").

3.2 Abbreviations

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

CA	Communications Assistant
CLI	Calling Line Identity
CLIP	Calling Line Identification Presentation
COLP	Connected Line Identification Presentation

COLR	Connected Line Identification Restriction
DTMF	Dual Tone Multi Frequency
GSM	Global System for Mobile communication
ICT	Information and Communication Technology
IMS	IP Multimedia Sub-system
IP	Internet Protocol
ITU-T	International Telecommunication Union - Telecommunication
IVR	Interactive Voice Response
PBX	Private Branch Exchange
PSTN	Public Switched Telephone Network
SIP	Session Initiation Protocol
UN	United Nations
VRS	Video Relay Service

4 General information on relay services

4.1 A relay service

A relay service is an ICT service, as outlined in figure 1, that enables users of different modes of communication to interact by providing conversion between the modes of communication. The connections in figure 1 represent general call and media connections and do not show the technological routes of the connections or points of media mixing.

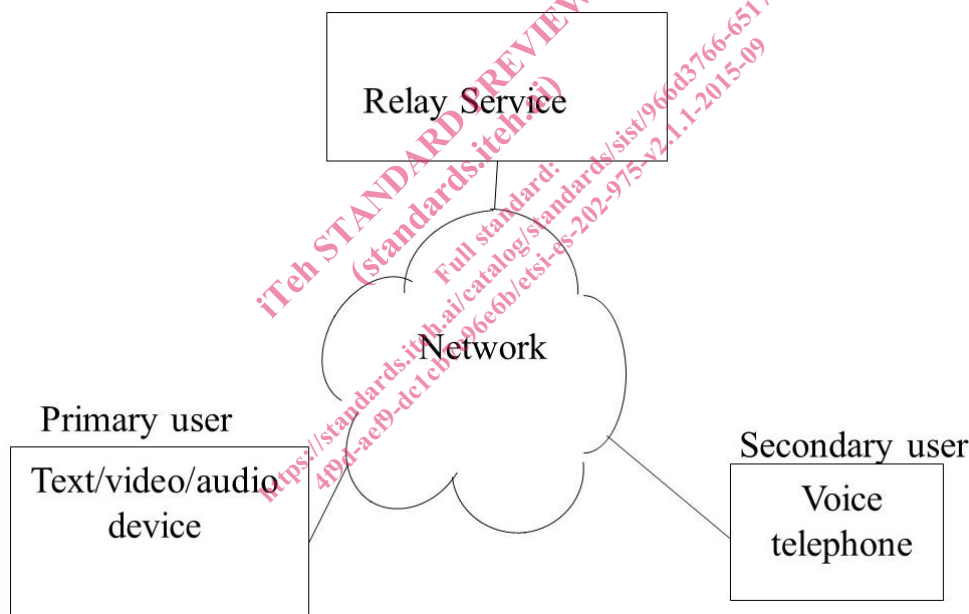


Figure 1: Communication via a relay service over a network

EXAMPLE: In its simplest form, the relay service is outside the network and can be provided using a communications assistant to mediate between a text telephone user and a voice telephone user. The service can be provided by a relay service provider over any form of connection, for example over a mobile network or via an IP connection where the text/video/audio device can be based on mainstream ICT equipment.

The aim of a relay service is to allow any user in any network, using one mode of communication, to communicate with another user using a different mode of communication in the same, or in any other network, via a relay service.

Relay services can interpret between the different modes of communication used by call participants since ideally it is possible to send and receive high-quality real time text, video and voice-over-IP calls to and from any product used for mainstream communication (such as telecommunications terminals, computers (including public ones) and mobile phones with minimal network, firewall or terminal restrictions).

In order to satisfy the requirements of the UN Convention on the rights of persons with disabilities [i.13], it is essential that interoperability is achieved between all services, so as to provide worldwide communication equivalent to that provided for other users.

4.2 Service types

There are a number of different types of relay service offering conversion between differing modes of communication and many are still under development. The present document deals with the following relay services:

- text relay services;
- speech to speech relay services;
- video relay services (for sign language); and
- captioned telephony services.

NOTE: The clauses previously addressing lip reading relay services, as well as text-to-text and fax, have been removed in the present document.

4.3 Relay service provision

The present document provides a set of requirements for relay services that can form the basis of a purchasing contract between some commissioning organization and a relay service provider.

The service provided to the primary user with functional limitations is often subsidized in some way, e.g. to take account of the cost of interpretation, the costs being partly or wholly funded by a third party, commonly some government agency. There are various ways in which a relay service can be provided and paid for and such arrangements tend to differ from country to country (see BT SIN 359 [i.11]).

4.4 Service hours

Although desirable, it is not always feasible to provide a full 24-hour relay service, particularly in the case of those services with a relatively restricted usage and in the early trial stages of the provision of a new relay service.

The present document therefore provides for two possible options:

- a) a full 24-hour relay service; and
- b) a limited-hour relay service.

4.5 Supplementary services

Most supplementary services rely on special provisions in the network and cannot normally be provided by relay service providers. Nevertheless supplementary services such as call diversion or message storage that are provided on many networks can usually be made available in conjunction with any form of relay service.

Relay services may need to make special arrangements with network providers when offering such supplementary services. They also imply some special requirements which are dealt with in informative Annex C.

These additional services would normally be provided at the user's option at an additional charge, but may alternatively be provided as part of the basic service offering.