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Accessibility requirements for ICT products and services





**HARMONISED EUROPEAN STANDARD**

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# Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Human Factors (HF), and the eAccessibility Joint Working Group (JWG) of CEN/CENELEC/ETSI and is now submitted for the combined Public Enquiry and Vote phase of the standards EN Approval Procedure.

EN 301 549 was originally produced under Mandate M 376 [i.3] and specified functional accessibility requirements applicable to ICT products and services, together with a description of the test procedures and evaluation methodology for each accessibility requirement in a form that is suitable for use in procurement.

EN 301 549 v.3.2.1 was prepared under the Commission's standardisation request C(2017)2585 final [i.27] to provide, in additions to its other uses, one voluntary means of conforming to the essential requirements of Directive 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies [i.28]. The minimum requirements of the European Web Accessibility Directive (Directive 2016/2102) are explicitly detailed in Annex ZA of the present document.

This revision to EN 301 549 has been prepared under the Commission's standardisation request C(2022) 6456 final [i.29] to provide, in additions to its other uses, one voluntary means of conforming to the essential requirements of Directive 2019/882 on the accessibility requirements for products and services [i.30]. The minimum requirements of Directive 2019/882 are explicitly detailed in Annex ZB.

Once the present document is cited in the Official Journal of the European Union under Directive 2019/882 [i.30], conformance with the normative clauses of the present document given in the tables in Annex A.2 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

The present document has been developed from EN 301 549 [i.31] (V3.2.1) (03-2021).

The significant changes since EN 301 549 [i.31] (V3.2.1) are:

* the requirements related to Real-Time Text (RTT) in clause 6.2 have been significantly revised and extended to include total conversation;
* the requirements of clauses 9, 10 and 11 have all been updated to align with the W3C WCAG 2.2 recommendation [4];
* a new Annexe ZA showing the relationship between the present document and the essential requirements of Directive 2016/2102 has been added (this is an update of Annex A from the previous version of EN 301 549);
* a new Annexe ZB showing the relationship between the present document and the essential requirements of Directive 2019/882 has been added.
* a new Annex A.2 has been added that enables conformance of specific ICT products and services with the essential requirements of Directive 2019/882 to be evaluated.

|  |  |
| --- | --- |
| **National transposition dates** | |
| Date of adoption of this EN: | 10 March 2021 |
| Date of latest announcement of this EN (doa): | 30 June 2021 |
| Date of latest publication of new National Standard or endorsement of this EN (dop/e): | 31 December 2021 |
| Date of withdrawal of any conflicting National Standard (dow): | 31 December 2022 |

# Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**may not**", "**need**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](http://portal.etsi.org/Help/editHelp!/Howtostart/ETSIDraftingRules.aspx) (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 developed in response to standardisation request M 587 [i.29] from the European Commission to CEN, CENELEC and ETSI. It is a revision of the European Standard (EN) that was initially prepared in response to Mandate M 554 [i.27].

The present document covers a wide range of requirements for a variety of ICT solutions. It is relevant for all organizations who buy, develop or manufacture ICT products or services. It consists of fourteen clauses and eight annexes:

* Clauses 0 to 3 include background information, the scope of the standard, and links to other standards, definitions and explanations of abbreviations.
* Clause 4 contains functional performance statements that explain the functionality that is needed to enable users with different abilities to locate, identify and operate functions in technology. The user needs underlying the functional performance statements are the basis for the requirements in subsequent clauses.
* Clauses 5 to 13 provide specific testable criteria for accessible ICT, related to technical requirements for different kinds of ICT, starting with generic requirements in clause 5.
* Clause 14 is about conformance. All clauses except those in clause 12, related to documentation and support services, are self-scoping. This means they are introduced with the phrase 'Where ICT <pre-condition>'. Conformance is achieved when the pre-condition is true and the corresponding test (in Annex C) is passed. When the pre-condition is false the requirement is not applicable.
* Annex A is divided into two parts, A.1 and A.2 that are intended to be used to enables the conformance of specific ICT products and services with the essential requirements of the Directives to be evaluated.
* Annex A.1 directs users to the tables in Annex ZA, which contains tables that are suitable for evaluating the conformance of specific websites and mobile applications with Directive 2016/2102 [i.28].
* Annex A.2 contains five tables which allow a specific ICT product or service to be evaluated for conformance with Directive 2019/882 [i.30].
* Annex B contains a table showing which of the requirements set out in clauses 5 to 13 related to different types of ICT support the user needs as expressed in the functional performance statements of clause 4.
* Annex C is a normative annex that sets out the means necessary to determine conformance with the individual requirements. It does not provide a testing methodology.
* Annex D points to additional resources related to improving accessibility for users with limited cognitive, language and learning abilities.
* Annex E provides an overview and simple explanation of the structure of the present document. It talks in general about how EN 301 549 can be used and identifies additional resources that are of benefit to those intending to apply EN 301 549 in specific technical sectors such as the Web and digital television.
* Annex F provides a change history table.
* Annex ZA has two tables with requirements related to Directive 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies [i.28]. [Table ZA.1](#TAB_ZA1) applies to web pages and documents and [Table ZA.2](#TAB_ZA2) applies to mobile applications. The minimum requirements are collected from clauses 9, 10 and 11 and some requirements from clauses 5, 6, 7 and 12 that are relevant to fulfill the Directive.
* Annex ZB has three tables with requirements related to Directive 2019/882 on the accessibility requirements for products and services [i.30]. [Table ZB.1](#TAB_ZB1) applies to the products within the scope of the Directive. [Table ZB.2](#TAB_ZB2) applies to all services within the scope of the Directive. [Table ZB.3](#TAB_ZB3) applies to the specific services within the scope of the Directive.

When the present document is used for most purposes, including when used in ICT procurement, all of the requirements in clauses 5 to 13, as well as the functional performance statements in clause 4 should be considered. The potential applicability of any requirement can be determined from the self-scoping phrase at the beginning of each requirement.

When the present document is used as the basis to determine conformity with the essential requirements of Directive 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies [i.28], [Table ZA.1](#TAB_ZA1) and [Table ZA.2](#TAB_ZA2) in Annex ZA identify all the [applicable requirement](#applicablerequirement)s.

When the present document is used as the basis to determine conformity with the essential requirements of Directive 2019/882 on the accessibility requirements for products and services [i.30], [Table A.1](#TAB_A1), [Table A.2](#TAB_A2), [Table A.3](#TAB_A3), [Table A.4](#TAB_A4), and [Table A.5](#TAB_A5) in Annex A.2 identify all the [applicable requirement](#applicablerequirement)s.

Note 1: The present document reflects the content of the W3C WCAG 2.2 Recommendation [4].

Note 2: Annex E provides an overview and simple explanation of the structure of the present document, including an explanation of how it can be used. Readers who are unfamiliar with the present document are recommended to read Annex E first to give them a better understanding of the present document and how to use it.

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# 1 Scope

The present document specifies the functional accessibility requirements applicable to ICT products and services, together with a description of the test procedures and evaluation methodology for each accessibility requirement.

ICT (information and communication technology) covers all types of electrical and electronic technologies including but not limited to web, non-web and hybrid documents, software, hardware and services including communication technologies.

The present document is intended for use by designers, developers, evaluators, providers, market surveillance entities, procurers, researchers, and anyone else interested in the accessibility of ICT products and services.

The present document is not intended to apply to assistive technologies that are designed specifically for use by people with disabilities, except for requirement 11.5.2.4 that requires assistive technologies to use the [documented platform accessibility services](#documentedplatformaccessibilityservice), although making assistive technologies cross-disabiilty accessible is desirable. The requirements do apply to the launch of assistive technologies since that is a function of the platform not the assistive technology.

The relationship between the present document and the essential requirements of Directive 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies [i.28] is given in Annex ZA.

The relationship between the present document and the essential requirements of Directive 2019/882 on the accessibility of ICT products and services [i.30] is given in Annex ZB.

The present document contains the necessary accessibility requirements and provides a reference document such that if procedures are followed by different actors, the results of testing are similar and the interpretation of those results is clear. The test descriptions and evaluation methodology included in the present document are elaborated to a level of detail compliant with ISO/IEC 17007:2009 [i.14], so that conformance testing can give conclusive results.

# 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 at [ETSI References in docbox](https://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 ETS 300 381 (Edition 1) (December 1994): "Telephony for hearing impaired people; Inductive coupling of telephone earphones to hearing aids".

[2] ETSI ES 200 381-1 (V1.2.1) (October 2012): "Telephony for hearing impaired people; Inductive coupling of telephone earphones to hearing aids; Part 1: Fixed-line speech terminals".

[3] ETSI ES 200 381-2 (V1.1.1) (October 2012): "Telephony for hearing impaired people; Inductive coupling of telephone earphones to hearing aids; Part 2: Cellular speech terminals".

[4] W3C Recommendation (December 2024): "Web Content Accessibility Guidelines (WCAG) 2.2".

Note: Available at <https://www.w3.org/TR/2024/REC-WCAG22-20241212/>.

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

[i.1] ANSI/IEEE C63.19 (2019): "American National Standard Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids".

[i.2] ANSI/TIA-4965: "Telecommunications telephone terminal equipment receive volume control requirements for digital and analogue wireline handset terminals".

[i.3] European Commission M 376-EN: "Standardization Mandate to CEN, CENELEC and ETSI in support of European accessibility requirements for public procurement of products and services in the ICT domain".

[i.4] ETSI EG 201 013: "Human Factors (HF); Definitions, abbreviations and symbols".

[i.5] ETSI ES 202 975: "Human Factors (HF); Requirements for relay services".

[i.6] ETSI ETS 300 767: "Human Factors (HF); Telephone Prepayment Cards; Tactile Identifier".

[i.7] ETSI/CEN/CENELEC TR 101 550: "Documents relevant to EN 301 549 "Accessibility requirements suitable for public procurement of ICT products and services in Europe"".

[i.8] ETSI/CEN/CENELEC TR 101 551: "Guidelines on the use of accessibility award criteria suitable for public procurement of ICT products and services in Europe".

[i.9] ETSI TR 102 612: "Human Factors (HF); European accessibility requirements for public procurement of products and services in the ICT domain (European Commission Mandate M 376, Phase 1)".

[i.10] ETSI TS 126 114: "Universal Mobile Telecommunications System (UMTS); LTE; IP Multimedia Subsystem (IMS); Multimedia telephony; Media handling and interaction (3GPP TS 26.114)".

[i.11] ETSI TS 122 173: "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)".

[i.12] ETSI TS 124 229: "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)".

[i.13] IETF RFC 4103 (2005): "RTP Payload for Text Conversation".

[i.14] ISO/IEC 17007:2009: "Conformity assessment - Guidance for drafting normative documents suitable for use for conformity assessment".

[i.15] ISO 9241-11:2018: "Ergonomics of human-system interaction - Part 11: Usability: Definitions and concepts".

[i.16] ISO 9241-110:2020: "Ergonomics of human-system interaction - Part 110: Interaction principles".

[i.17] ISO 9241-171:2008: "Ergonomics of human-system interaction - Part 171: Guidance on software accessibility".

[i.18] Void.

[i.19] ISO/IEC 13066-1:2011: "Information technology - Interoperability with assistive technology (AT) - Part 1: Requirements and recommendations for interoperability".

[i.20] Recommendation ITU-T E.161 (2001): "Arrangement of digits, letters and symbols on telephones and other devices that can be used for gaining access to a telephone network".

[i.21] Recommendation ITU-T G.722 (1988): "7 kHz audio-coding within 64 kbit/s".

[i.22] Recommendation ITU-T G.722.2 (2003): "Wideband coding of speech at around 16 kbit/s using Adaptive Multi-Rate Wideband (AMR-WB)".

[i.23] Recommendation ITU-T V.18 (2000): "Operational and interworking requirements for DCEs operating in the text telephone mode".

[i.24] TIA-1083-B (2015): "Telecommunications Communications Product; Handset Magnetic Measurement Procedures and Performance Requirements".

[i.25] Section 508 of the United States Rehabilitation Act of 1973, revised 2017.

Note: Available at <https://www.section508.gov/manage/laws-and-policies>.

[i.26] W3C Group Note 15 November 2024: "Guidance on Applying WCAG 2 to Non-Web Information and Communications Technologies (WCAG2ICT)".

Note: Available at <https://www.w3.org/TR/2024/NOTE-wcag2ict-22-20241115/>.

[i.27] M 554 Commission Implementing Decision C(2017)2585 of 27.4.2017 on a standardisation request to the European standardisation organisations in support of Directive (EU) 2016/2102 of the European Parliament and of the Council on the accessibility of the websites and mobile applications of public sector bodies.

[i.28] Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies.

[i.29] M 587 Commission Implementing Decision C(2022) 6456 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.30] 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.31] ETSI/CEN/CENELEC EN 301 549 (V3.2.1) (March 2021): "Accessibility requirements for ICT products and services".

[i.32] ETSI/CEN/CENELEC TR 101 552: "Guidance for the application of conformity assessment to accessibility requirements for public procurement of ICT products and services in Europe".

[i.33] ISO/IEC TS 20071-25:2017: "Information technology - User interface component accessibility - Part 25: Guidance on the audio presentation of text in videos, including captions, subtitles and other on-screen text".

[i.34] W3C Recommendation (September 2015): "Authoring Tool Accessibility Guidelines (ATAG) 2.0".

Note: Available at <https://www.w3.org/TR/ATAG20/>.

[i.35] W3C Working Group Note (December 2015): "User Agent Accessibility Guidelines (UAAG) 2.0".

Note: Available at <https://www.w3.org/TR/UAAG20/>.

[i.36] ISO 21542:2021: "Building construction - Accessibility and usability of the built environment".

[i.37] ISO/IEC Guide 71:2014: "Guide for addressing accessibility in standards".

[i.38] Recommendation ITU-T T.140 (1998): "Protocol for multimedia application text conversation".

[i.39] Recommendation ITU-T F.703 (2000): "Multimedia conversational services".

[i.40] Schema.org Accessibility Properties for Discoverability Vocabulary.

Note: Available at <https://www.w3.org/community/reports/a11y-discov-vocab/CG-FINAL-vocabulary-20240906/>.

[i.41] Void.

[i.42] Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC.

[i.43] W3C Recommendation (December 2008)/ISO/IEC 40500:2012: "Web Content Accessibility Guidelines (WCAG) 2.0".

Note: Available at <https://www.w3.org/TR/WCAG20/>.

[i.44]

Notehttps://www.w3.org/TR/WCAG21/

[i.45] ETSI TR 126 982: "5G; Implementation guidelines for Multiparty RTT (3GPP TR 26.982).

[i.46] GSMA PRD IR.92: "IMS Profile for Voice and SMS".

[i.47] GSMA PRD IR.94 "IMS Profile for Conversational Video Service"

[i.48] GSMA NG.114: "IMS Profile for Voice, Video and Messaging over 5GS".

[i.49] ETSI TS 103 478: "Emergency Communications (EMTEL); Pan-European Mobile Emergency Application".

[i.50] ETSI TS 103 479: "Emergency Communications (EMTEL); Core elements for network independent access to emergency services".

[i.51] ETSI TS 103 871: "Emergency Communications (EMTEL); PEMEA Real-Time Text Extension".

[i.52] IETF RFC 3261: "SIP: Session Initiation Protocol", J. Rosenberg et.al., 2005.

[i.53] IETF RFC 3550: "RTP: A Transport Protocol for Real-Time Applications", H. Schulzrinne et.al.,2003.

[i.54] IETF RFC 9071 (2021): "RTP-Mixer Formatting of Multiparty Real-Time Text"

[i.55] ISO/IEC 10646:2020: "Information technology - Universal coded character set (UCS)"

[i.56] ISO/IEC 17549-1:2022: Information technology — User interface requirements and recommendations on menu navigation: Part 1: Framework

[i.57] ETSI TS 126 226: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Cellular text telephone modem; General description (3GPP TS 26.226)"

[i.58] ETSI TS 103 919: "Emergency Communications (EMTEL); Accessibility and interoperability of emergency communications and for the answering of emergency communications by the public safety answering points (PSAPs) (including to the single European Emergency number 112)"

[i.59] IETF RFC 8831: "WebRTC Data Channels"

[i.60] W3C Recommendation (October 2024): "WebRTC: Real-Time Communication in Browsers"

[i.61] ETSI TR 103 708: "Real-Time Text (RTT) in Multiparty Conference Calling".

[i.62] ISO/IEC 23859:2023: "Information technology – User interfaces – Requirements and recommendations on making written text easy to read and understand".

[i.63] Recommendation ITU-T P.1305 (2016): "Effect of delays on telemeeting quality".

[i.64] IETF RFC 5194 (2008): " Framework for Real-Time Text over IP Using the Session Initiation Protocol (SIP)"

[i.65] Anthropometry of Wheeled Mobility Project – Final Report, Center for Inclusive Design and Environmental Access (2010).

Note: Available at <https://idea.ap.buffalo.edu/wp-content/uploads/sites/110/2020/01/AnthropometryofWheeledMobilityProject_FinalReport.pdf>

[i.66] CEN/CENELEC EN 17210: "Accessibility and usability of the built environment - Functional requirements"

[i.67] Recommendation H.Sup1(1999): " Application profile - Sign language and lip-reading real-time conversation using low bit rate video communication".

Note: Available at <https://www.itu.int/rec/dologin.asp?lang=e&id=T-REC-H.Sup1-199905-I!!MSW-E&type=items>

[i.68] ETSI TR 104 060: " Guidance on how to apply the EN 301 549 to di"gital television products"

# 3 Definition of terms, symbols and abbreviations

## 3.1 Terms

For the purposes of the present document, the terms given in ETSI EG 201 013 [i.4] and the following 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.15])

Note 1: [Context of use](#contextOfUse) 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.

**accessibility inspection tool for platforms**: software-based tool that can be used by developers or third party accessibility evaluators to check the use of the [documented platform accessibility services](#documentedplatformaccessibilityservice).

Note 1: For a given platform, the accessibility inspection tool can be:

1. Platform-provided tool for accessibility inspection.
2. Platform-provided assistive technologies, if 1 is not available or isn’t useful to test a given requirement.
3. Generally-available assistive technologies for the platform, if neither 1 nor 2 are available.

Note 2: Platform tools are resources provided to software developers by the organisation producing the platform. Some platform tools may include the function of inspecting the accessibility of ICTs developed for that platform. Some platform tools may be available to developers but not to 3rd party accessibility evaluators.

Note 3: Platform-provided assistive technologies are assistive technologies that are part of the platform. In the context of the present document, operating systems are popular examples of platforms.

Note 4: Examples of assistive technologies (either platform or non-platform) that can be used as inspection tools are, but are not limited to, a screen reader and a voice control system.

**access space:** space intended to be occupied by the person, including their Assistive Technology, while they are using the product

**applicable (accessibility) requirement**: a requirement, whose pre-conditions are true for an ICT

**applicable test**: a test, whose pre-conditions are true for an ICT

**applicable scenario**: a scenario, whose pre-conditions are true for an ICT

**Assistive Listening Devices (****ALDs):** devices that help separate the sounds, particularly speech, that a person wants to hear from background noise by bringing sound directly into the ear

Note: These are often found in meetings and public venues such as plays, concerts and places of worship. They can also be used at home with televisions and other products with auditory output.

**Assistive Technology (AT):** 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

Note 1: Assistive technology is an umbrella term that is broader than assistive products.

Note 2: Assistive technology can include assistive services, and professional services needed for assessment, recommendation and provision.

Note 3: Where ICT does not support directly connected assistive technology, but which can be operated by a system connected over a network or other remote connection, such a separate system (with any included assistive technology) can also be considered assistive technology.

**audio description:** narration added to the soundtrack to describe important visual details of synchronised audio-visual content, which cannot be understood from the main soundtrack alone

Note 1: This is also variously described using terms such as "video description" or variants such as "descriptive narration".

Note 2: Audio description helps blind persons, persons with low vision, and persons who need assistance with understanding important facial expressions and other visual content to perceive and understand the visual content of audio-visual media.

Note 3: Audio description can provide information about actions, characters, scene changes, on-screen text, and other visual content.

Note 4: The audio description is inserted in the gaps in the main audio narrative. It typically uses a different voice, tone, or speed to separate it from the main audio.

**authoring tool:** software that can be used to create or modify content

Note 1: An authoring tool may be used by a single user or multiple users working collaboratively.

Note 2: An authoring tool may be a single stand-alone application or be comprised of collections of applications.

Note 3: An authoring tool may produce content that is intended for further modification or for use by end-users.

**captions:** synchronized visual and/or text alternative for both speech and non-speech audio information needed to understand the [media](#media) content (after WCAG 2.2 [4])

Note 1: The term captions is generally used for referring to [subtitles](#subtitles), when these are used as an accommodation for deaf or hard of hearing users.

Note 2: Closed Captions are equivalents that can be turned on and off with some players (after WCAG 2.2). Outside North America, the term Subtitles is often used synonymously with Closed Captions.

Note 3: Open Captions are any captions that cannot be turned off with some players. For example, if the captions are visual equivalent images of text embedded in video (after WCAG 2.2). Open captions embedded within the video cannot easily be turned into machine-readable text for assistive technologies. The term "Hardsubs" is sometimes used in place of Open Captions.

**closed functionality:** functionality that is limited by characteristics that prevent a user from attaching, installing or using [assistive technology](#assistiveTechnology)

**communication client:** terminating software that transmits and receives communications

Note 1: A communication client can be limited to work with only one communication system that is provided by one specific system provider.

Note 2: The ICT that is, or includes, the communication client is responsible for ensuring that the content of the communication is communicated to and from the user of the communication client.

**communication system:** ICTthat enables continuous bidirectional voice communication to flow between [communication client](#communicationclient)s

Note 1: A communication system can contain several component parts that may not be separately identifiable from outside the system. Some communications systems might simply be an “interpersonal communication service” as defined in point 5 of Article 2 of Directive (EU) 2018/1972.

Note 2: Some communication systems are separate from their communication clients while in others the communication clients form an integral part of a proprietary communication system.

**compatible communication system**: a [communication system](#communicationsystem) that uses the same communication standards as another communication system

**content:** information and sensory experience to be communicated to the user by means of software, including code or mark-up that defines the content's structure, presentation, and interactions (after WCAG2ICT [i.26])

Note: Content occurs in three places: web pages, documents and software. When content occurs in a web page or a document, a user agent is needed in order to communicate the content's information and sensory experience to the user. When content occurs in software, a separate user agent is not needed in order to communicate the content's information and sensory experience to the user - the software itself performs that function.

**context of use:** combination of users, goals and tasks, resources, and environment. (from ISO 9241-11:2018 [i.15])

Note: The "environment" in a context of use includes the technical, physical, social, cultural and organizational environments.

**document:** logically distinct assembly of [content](#content) (such as a file, set of files, or streamed [media](#media)) that functions as a single entity rather than a collection, that is not part of software and that does not include its own user agent (after WCAG2ICT [i.26])

Note 1: A document always requires a user agent to present its content to the user.

Note 2: Letters, e-mail messages, spreadsheets, books, pictures, presentations, and movies are examples of documents.

Note 3: Software configuration and storage files such as databases and virus definitions, as well as computer instruction files such as source code, batch/script files, and firmware, are examples of files that function as part of software and thus are not examples of documents. If and where software retrieves "information and sensory experience to be communicated to the user" from such files, it is just another part of the content that occurs in software and is covered by WCAG2ICT like any other parts of the software. Where such files contain one or more embedded documents, the embedded documents remain documents under this definition.

Note 4: A collection of files zipped together into an archive, stored within a single virtual hard drive file, or stored in a single encrypted file system file, do not constitute a single document when so collected together. The software that archives/encrypts those files or manages the contents of the virtual hard drive does not function as a user agent for the individually collected files in that collection because that software is not providing a fully functioning presentation of that content.

Note 5: Anything that can present its own content without involving a user agent, such as a self-playing book, is not a document but is software.

Note 6: A single document may be composed of multiple files such as the video content and closed caption text. This fact is not usually apparent to the end-user consuming the document/content.

Note 7: An assembly of files that represented the video, audio, captions and timing files for a movie is an example of a document.

Note 8: A binder file used to bind together the various exhibits for a legal case would not be a document.

Note 9: Documents may contain sub-documents.

**documented accessibility feature:** a feature offered to end-users that can enhance accessibility and that is provided to users by the platform author in the user interface and is documented in instructional material made available to users

Note: Such features are often presented to users as accessibility user preference settings.

**documented platform accessibility service:** a subset of the platform's application programming interface (API) that supports interoperability between a user interface running on the platform software and assistive technology

Note 1: They allow application developers to create software that is compatible with assistive technologies.

Note 2: These services are also often used by non-accessibility software and testing software.

**documented platform service**: a service provided by the platform that is documented by the platform author for public use by accessibility applications and utilities created by third parties

Note: Such services are provided to keep software from attaching itself in ad-hoc fashion to platforms.

**embedded:** directly included in the [content](#content) that is downloaded to the user agent and its extension, and is intended to be used in rendering the web page

Note: Something that is downloaded using a mechanism on the web page but is not used in rendering the page is not "embedded" in the page.

**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 web pages, electronic content, telecommunications products, computers and ancillary equipment, software including mobile applications, information kiosks and transaction machines, videos, IT services, and multifunction office machines which copy, scan, and fax documents.

**interlingual subtitles:** [subtitles](#subtitles) that translate the original audio information into a different language

Note: Interlingual subtitles provide a translation of the audio content into a different language, which is visually displayed to enable the understanding of the content by persons who do not understand, or have difficulties understanding, the language of the original audio content.

**mechanically operable part:** operable part that has a mechanical interface to activate, deactivate, or adjust the ICT

Note: Examples of mechanically operable parts include scanner covers, notebook docking stations and lids as well as physical switches and latches.

**mechanism for private listening:** auditory output designed so that only the current user can receive the sound

Note: Personal headsets, directional speakers and audio hoods are examples of mechanisms for private listening.

**media:** different specific forms of presenting information to the user

Note: Examples of media include, but are not limited to, text, video, audio, graphics, animations, etc.

**menu:** a set of selectable options (after ISO 17549-1:2022 [i.53])

**multimedia:** combinations of static and/or dynamic [media](#media) presented simultaneously

Note: Examples of multimedia include combinations of text and video, or audio and animation, etc.

**non-text content:** [content](#content) that is not a sequence of characters that can be programmatically determined or where the sequence is not expressing something in human language (after WCAG 2.2 [4])

Note: An image, graphic, audio clip, or other feature that conveys meaning through either a picture or sound. Examples include: buttons, check boxes, input fields, pictures, animations, and audio/video that’s embedded or streamed.

**non-web document:** [document](#document) that is not a web page, not [embedded](#embedded) in web pages nor used in the rendering or functioning of the page

**non-web software:** software that is not a web page, not [embedded](#embedded) in web pages nor used in the rendering or functioning of the page

**open functionality:** functionality that supports access by [assistive technology](#assistiveTechnology)

Note: This is the opposite of closed functionality.

**operable part:** component of ICT used to activate, deactivate, or adjust the ICT

Note 1: An on-screen button is an example of an operable part provided by software.

Note 2: Operable parts do not include parts involved only in maintenance or repair or other actions that are not expected of a typical user if the product is not malfunctioning. These actions include: clearing paper jams internal to the machine, replacing items or parts internal to the machine that may expose the end user to sharp or hot surfaces, replacing or repairing items designated by manufacturers as service or maintenance items in user documentation.

**platform software (platform):** collection of software components that runs on an underlying software or hardware layer, and that provides a set of software services to other software components that allows those applications to be isolated from the underlying software or hardware layer (after ISO/IEC 13066-1 [i.19])

Note: A particular software component might play the role of a platform in some situations and a client in others.

**primary user (of relay service):** person who is using relay services because of a disability

Note: See [secondary user](#secondaryuser).

**programmatically determinable:** able to be read by software from developer-supplied data in a way that other software, including assistive technologies, can extract and present this information to users in different modalities

Note: WCAG 2.2 uses "determined" where this definition uses "able to be read" (to avoid ambiguity with the word "determined").

**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

Note 1: Users will perceive communication as continuous if the delay between text being created by the sender and received by the recipient is less than 1 s. However, the actual delay will be dependent on the communication network.

Note 2: The creation of text will differ between systems where text is entered on a word-by-word basis (e.g. speech‑to‑text and predictive-text based systems) and systems where each character is separately generated (e.g. typing on a physical keyboard).

**relay service:** electronic communications service which enable bidirectional communication between remote end-users of different modes of communication (for example text, sign, speech) by providing conversion between those modes of communication, or by providing the needed cognitive support for end-users during the communication, by a human operator or automatic means

**RTT capabilities:** the ability of ICT to originate, present, transport, or otherwise process real-time text

Note: Some ICT is used to originate and present real-time text. Other ICT only transports or processes RTT in other ways that preserve the integrity of the RTT. All are therefore said to have or support RTT capabilities because all need to do their part for the RTT to work.

**RTT text-block termination:** a sentence terminating punctuation character or a line or message delimiter is entered or received, or a comma+space, or a 5 second delay without a new character within the text of a source

**satisfies a success criterion:** success criterion does not evaluate to "false" when applied to the ICT (after WCAG 2.2 [4])

**secondary user (of relay service):** voice communication user who gets involved in a call with a primary user via the support of a relay service

Note: See [primary user](#primaryuser).

NOTE: A secondary user may also be another primary user participating in a communication via another relay service connection, thus with the communication using chained relay services. Relay services usually have speech as one of their operation modalities.

**shortcut method:** a method that allows the rapid activation of a software feature from a [single user operation](#singleuseroperation)

**single user operation:** an operation performed by a user and recognised by the ICT as a discreet and complete operation

NOTE: A double-click is not a single user operation.

**software with closed functionality**: ICT that is software with [closed functionality](#closedFunctionality) or any software with closed functionality that is incorporated into the ICT

**spoken captions/subtitles audio captions/subtitles:** [captions](#caption)/[subtitles](#subtitles) that are voiced over the audiovisual [content](#content) (from ISO/IEC TS 20071-25 [i.31])

**stationary hardware( ICT):** ICT that stands on the floor, or is mounted on a wall or other immovable structure, and is not intended to be moved by its user

Note 1: Typically, stationary ICT rests on the ground (such as an information kiosk) or is installed in a wall (such as a machine that dispenses cash or performs other banking services).

Note 2: A manufacturer cannot control the height of ICT that is put on a table by someone else, but they are able to control the reach dimensions of self-contained ICT that rests on the ground and can specify the heights for installation in walls.

**subtitles:** written text that is offered in the audiovisual [content](#content), which aims to account for the spoken words of the content, as well as other elements of the soundtrack

Note 1: When subtitles are used as an accommodation for deaf or hard of hearing users, they are also known as captions or as subtitles for the hearing impaired.

Note 2: Outside North America, the term Subtitles is often used synonymously with Closed Captions. The term "Hardsubs" is sometimes used in place of Open Captions.

Note 3: Subtitles can appear anywhere on the display, and positioned to avoid overlapping content that needs to be visible (such as a "news ticker"), or where the background content would make the subtitles difficult to read.

**terminal:** combination of hardware and/or software with which the end user directly interacts and that provides the user interface

Note 1: The hardware may consist of more than one device working together e.g. a mobile device and a computer.

Note 2: For some systems, the software that provides the user interface may reside on more than one device such as a telephone and a server.

**total conversation:** bidirectional symmetric real time transfer of motion video, [real-time text](#realTimeText) and voice between users in two or more locations

**Uniform Resource Identifier (URI**): a compact string of characters for identifying an abstract or physical resource

Note 1: Examples of ICT resources that can be identified by URIs are communications addresses, web pages, digital books, servers, etc.

Note 2: A URL (Uniform Resource Locator) is a type of URI. One example of a URL is "[https://www.w3.org](https://www.w3.org" \t "_blank)". When entered in the address bar of a browser, it will render the home web page of the World Wide Web Consortium.

**user agent:** software that retrieves and presents [content](#content) for users (after WCAG 2.2 [4])

Note 1: Software that only displays the content contained within it is treated as software and not considered to be a user agent.

Note 2: An example of software that is not a user agent is a calculator application that does not retrieve the calculations from outside the software to present it to a user. In this case, the calculator software is not a user agent, it is simply software with a user interface.

Note 3: Software that only shows a preview of content such as a thumbnail or other non-fully functioning presentation is not providing user agent functionality.

**user interface:** all components of an interactive system (software or hardware) that provide information and/or controls for the user to accomplish specific tasks with the interactive system (from ISO 9241-110 [i.16])

**user interface element:** entity of the [user interface](#userInterface) that is presented to the user by the software (after ISO 9241‑171 [i.17])

Note 1: This term is also known as "user interface component".

Note 2: User-interface elements can be interactive or not.

**visiting communication client**: [communication client](#communicationclient) that is registered to work with a [communication system](#communicationsystem) that is different from to the one it is currently connected to

**web content:** [content](#content) that belongs to a web page, and that is used in the rendering or that is intended to be used in the rendering of the web page

Note: Web content is the text, visual or audio content that is made available online and encountered by users as part of the online usage and experience on websites. It may include text, images, sounds and audio, online videos, among other items placed within web pages.

**web page:** non-[embedded](#embedded) resource obtained from a single [URI](#uniformResourceIdentifierURI) using HTTP plus any other resources that are used in the rendering or intended to be rendered together with it by a [user agent](#userAgent) (after WCAG 2.2 [4])

## 3.2 Symbols

Void.

## 3.3 Abbreviations

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

ANSI American National Standards Institute

AT Assistive Technology

ATAG Authoring Tool Accessibility Guidelines (of W3C)

CEN Comité Européen de Normalisation

CSS Cascading Style Sheets

DOM Document Object Model

EFTA European Free Trade Area

EU European Union

FPS Frames Per Second

FXML XML-based user interface markup language

HTML HyperText Markup Language

HTTP HyperText Transfer Protocol

ICT [Information and Communication Technology](#informationAndCommunicationTechnologyICT)

IETF Internet Engineering Task Force

IMS IP Multimedia System

IP Internet Protocol

ISO International Organization for Standardization

ITU-T International Telecommunication Union - Telecommunication standardization sector

JWG Joint Working Group (of CEN/CENELEC/ETSI)

LED Light Emitting Device

ODF Open Document Format

OOXML Office Open eXtensible Markup Language

PSTN Public Switched Telephone Network

QVGA Quarter Video Graphics Array

RFC Request For Comment

RTT Real-Time Text

SIP Session Initiation Protocol

UAAG User Agent Accessibility Guidelines (of W3C)

URI [Uniform Resource Identifier](#uniformResourceIdentifierURI)

USB Universal Serial Bus

VGA Video Graphics Array

VOIP Voice Over IP

W3C World Wide Web Consortium

WAI Web Accessibility Initiative

WCAG Web Content Accessibility Guidelines (of W3C)

WLAN Wireless Local Access Network

XML eXtensible Markup Language

XUL XML User interface Language

# 4 Functional performance

## 4.1 Meeting functional performance statements

The statements set out in clause 4.2 are intended to describe the functional performance of ICT enabling people to locate, identify, and operate ICT functions, and to access the information provided, regardless of physical, cognitive or sensory abilities. Any differences in ability may be permanent, temporary or situational. The requirements in clauses 5 to 13 provide specific testable criteria for accessible ICT, corresponding to the user needs reflected in clause 4.2.

Note 1: The relationship between the requirements from clauses 5 to 13 and the functional performance statements is set out in Annex B.

Note 2: The intent of clause 4.2 is to describe the ICT performance in enabling users to access the full functionality and documentation of the product or the service with or without the use of assistive technologies.

Note 3: The methods of meeting the [accessibility](#accessibility) needs of users with multiple access needs will depend on the specific combination of needs. Meeting these user accessibility needs may be addressed by considering multiple clauses in clause 4.2.

Note 4: Several users' accessibility needs rely on ICT providing specific modes of operation. If a user is to activate, engage or switch to the mode that complies with his or her user accessibility needs, the method for activating, engaging or switching to that mode would need to comply with the same user accessibility needs.

## 4.2 Functional performance statements

### 4.2.1Usage without vision

Where ICT provides visual modes of operation, the ICT provides at least one mode of operation that does not require vision. This is essential for users without vision and benefits many more users in different situations.

Note 1: A web page or application with a well formed semantic structure can allow users without vision to identify, navigate and interact with a visual user interface.

Note 2: Audio and tactile user interfaces may contribute towards meeting this clause.

### 4.2.2 Usage with limited vision

Where ICT provides visual modes of operation, the ICT provides features that enable users to make better use of their limited vision. This is essential for users with limited vision and benefits many more users in different situations.

Note 1: Magnification, reduction of required field of vision and control of contrast, brightness and intensity can contribute towards meeting this clause.

Note 2: Where significant features of the user interface are dependent on depth perception, the provision of additional methods of distinguishing between the features may contribute towards meeting this clause.

Note 3: Users with limited vision may also benefit from non-visual access (see clause 4.2.1).

### 4.2.3 Usage without perception of colour

Where ICT provides visual modes of operation, the ICT provides a visual mode of operation that does not require user perception of colour. This is essential for users with limited colour perception and benefits many more users in different situations.

Note: Where significant features of the user interface are colour-coded, the provision of additional methods of distinguishing between the features may contribute towards meeting this clause.

### 4.2.4 Usage without hearing

Where ICT provides auditory modes of operation, the ICT provides at least one mode of operation that does not require hearing. This is essential for users without hearing and benefits many more users in different situations.

Note: Visual and tactile user interfaces, including those based on sign language, may contribute towards meeting this clause.

### 4.2.5 Usage with limited hearing

Where ICT provides auditory modes of operation, the ICT provides enhanced audio features. This is essential for users with limited hearing and benefits many more users in different situations.

Note 1: Enhancement of the audio clarity, reduction of background noise, providing a joint monaural option, adjustment of balance of both audio channels, increased range of volume and greater volume in the higher frequency range can contribute towards meeting this clause.

Note 2: Allowing the use of [Assistive Listening Devices](#assistiveListeningDevices), such as headsets with noise cancellation (connected by cable, Bluetooth or WLAN) can contribute towards meeting this clause.

Note 3: Users with limited hearing may also benefit from non-hearing access (see clause 4.2.4).

### 4.2.6 Usage with no or limited vocal capability

Where ICT requires vocal input from users, the ICT provides at least one mode of operation that does not require them to generate vocal output. This is essential for users with no or limited vocal capability and benefits many more users in different situations.

Note 1: Vocal output includes speech and other orally generated sounds, such as whistles and clicks.

Note 2: Keyboard, pen or touch user interfaces may contribute towards meeting this clause.

### 4.2.7 Usage with limited manipulation or strength

Where ICT requires manual actions, the ICT provides features that enable users to make use of the ICT through alternative actions not requiring manipulation, simultaneous action or hand strength. This is essential for users with limited manipulation or strength and benefits many more users in different situations.

Note 1: Examples of operations that users may not be able to perform include those that require fine motor control, path dependant gestures, pinching, twisting of the wrist, tight grasping, or simultaneous manual actions.

Note 2: One-handed operation, sequential key entry and speech user interfaces may contribute towards meeting this clause.

Note 3: Some users have limited hand strength and may not be able to achieve the level of strength to perform an operation. Alternative user interface solutions that do not require hand strength may contribute towards meeting this clause.

### 4.2.8 Usage with limited reach

Where ICT products are free-standing or installed, all the elements required for operation will need to be within reach of all users. This is essential for users with limited reach and benefits many more users in different situations.

Note 1 Considering the needs of wheelchair users and the range of user statures in the placing of operational elements of the user interface may contribute towards meeting this clause.

Note 2: Having a remote input capability can help satisfy this requirements.

### 4.2.9 Minimize photosensitive seizure triggers

Where ICT provides visual modes of operation,  
the ICT provides at least one mode of operation that minimizes the potential for triggering photosensitive seizures. This is essential for users with photosensitive seizure triggers.

Note: Limiting the area and number of flashes per second may contribute towards meeting this clause.

### 4.2.10 Usage with limited cognition, language or learning

The ICT provides features and/or presentation that makes it simpler and easier to understand, operate and use. This is essential for users with limited cognition, language or learning, and benefits many more users in different situations.

Note 1: Adjustable timings, error indication and suggestion, and a logical focus order are examples of design features that may contribute towards meeting this clause.

Note 2: Providing an audio output of the text is an example of providing support for people with limited reading abilities.

Note 3: Providing spelling aid and word prediction of the text is an example of providing support for people with limited writing abilities.

Note 4: Interaction with content can be made easier, and less prone to errors, by presenting tasks in steps that are easy to follow.

### 4.2.11 Usage with limited vision and hearing

Where ICT provides both visual and auditory modes of operation, the ICT provides at least one mode of operation that is operable with limited vision and hearing.

Note: This is essential for some users who are deafblind.

### 4.2.12 Privacy

Where ICT provides features for [accessibility](#accessibility), the ICT maintains the privacy of users of these features at the same level as other users.

Note: Enabling the connection of personal headsets for private listening, not providing a spoken version of characters being masked and enabling user control of legal, financial and personal data are examples of design features that may contribute towards meeting this clause.

# 5 Generic requirements

## 5.1 Closed functionality

### 5.1.1 Introduction (informative)

ICT has [closed functionality](#closedFunctionality) for many reasons, including design or policy. Some of the functionality of products can be closed because the product is self-contained and users are precluded from adding peripherals or software in order to access that functionality.

ICT may have closed functionality in practice even though the ICT was not designed, developed or supplied to be closed.

Computers that do not allow end-users to adjust settings or install software are functionally closed.

### 5.1.2 General

#### 5.1.2.1 Closed functionality

Where ICT includes [closed functionality](#closedFunctionality),  
the closed functionality shall meet the [applicable requirements](#applicablerequirement) set out in clauses 5.2 to 13.

Note 1: ICT may close some, but not all, of its functionalities. Only the closed functionalities have to meet the requirements of clause 5.1.

Note 2: The requirements within this clause replace those in clauses 5.2 to 13 that specifically state that they do not apply to closed functionality. This may be because they relate to compatibility with assistive technology or to the ability for the user to adjust system accessibility settings in products with closed functionality (e.g. products that prevent access to the system settings control panel).

#### 5.1.2.2 Assistive technology and closed functionality

Where ICT includes [closed functionality](#closedFunctionality),  
that closed functionality shall be operable without requiring the user to attach, connect or install [assistive technology](#assistiveTechnology) and shall meet the generic requirements of clauses 5.1.3 to 5.1.6 as applicable. Personal headsets and personal induction loops shall not be classed as assistive technology for the purpose of this clause.

### 5.1.3 Non-visual access

#### 5.1.3.1 Audio output of visual information

Where ICT includes [closed functionality](#closedFunctionality), and visual information is needed to enable the use of the closed functionality of the ICT,  
the closed funcionality shall be provided through one or more non-visual means that includes auditory output to enable the use of those functions.

Note 1: Non-visual access may be in an audio form, including speech, or a tactile form such as braille for deaf-blind users.

Note 2: The visual information needed to enable use of some functions may include operating instructions and orientation, transaction prompts, user input verification, error messages and non-text content.

#### 5.1.3.2 Auditory output delivery including speech

Where ICT includes [closed functionality](#closedFunctionality), and auditory output is provided as non-visual access to closed functionality,  
the auditory output shall be delivered:

1. either directly by a mechanism included in or provided with the ICT; or
2. by a personal headset that can be connected through a 3,5 mm audio jack without requiring the use of vision.

Note 1: Mechanisms included in or provided with ICT may be, but are not limited to, a loudspeaker, a built-in handset/headset, or other industry standard coupled peripheral.

Note 2: An industry standard connection could be a wireless connection.

Note 3: Some users may benefit from the provision of an inductive loop.

#### 5.1.3.3 Auditory output correlation (recommendation)

Where ICT includes [closed functionality](#closedFunctionality), and auditory output is provided as non-visual access to closed functionality, and information is displayed on the screen,  
the ICT should provide auditory information that allows the user to correlate the audio with the information displayed on the screen.

Note 1: Many people who are blind and partially sighted still have visual ability, and use aspects of the visual display even if it cannot be fully comprehended. An audio alternative that is both complete and complementary includes all visual information such as focus or highlighting, so that the audio can be correlated with information that is visible on the screen at any point in time.

Note 2: Examples of auditory information that allows the user to correlate the audio with the information displayed on the screen include structure and relationships conveyed through presentation.

#### 5.1.3.4 Speech output user control

Where ICT includes [closed functionality](#closedFunctionality), and speech output is provided as non-visual access to closed functionality,  
the speech output shall be capable of being interrupted and repeated when requested by the user, where permitted by security requirements.

Note 1: It is best practice to allow the user to pause speech output rather than just allowing them to interrupt it.

Note 2: It is best practice to allow the user to repeat only the most recent portion rather than requiring play to start from the beginning.

#### 5.1.3.5 Speech output automatic interruption

Where ICT includes [closed functionality](#closedFunctionality), and speech output is provided as non-visual access to closed functionality,  
the ICT shall interrupt current speech output when a user action occurs and when new speech output begins.

Note: Where it is essential that the user hears the entire message, e.g. a safety instruction or warning, the ICT may need to block all user action so that speech is not interrupted.

#### 5.1.3.6 Speech output for non-text content

Where ICT includes [closed functionality](#closedFunctionality), and presents [non-text content](#nonTextContent),  
the alternative for non-text content shall be presented to users via speech output unless the non-text content is pure decoration or is used only for visual formatting. The speech output for non-text content shall follow the guidance for "text alternative" described in WCAG 2.2 [4] Success Criterion 1.1.1.

#### 5.1.3.7 Speech output for video information

Where ICT includes [closed functionality](#closedFunctionality), and pre-recorded video [content](#content) is needed to enable the use of closed functionality of the ICT, and speech output is provided as non-visual access to closed functionality,  
the speech output shall present equivalent information for the pre‑recorded video content.

Note: This speech output can take the form of an [audio description](#audioDescription) or, where there is a transcript of the video, a spoken version of the transcript content.

#### 5.1.3.8 Masked entry

Where ICT includes [closed functionality](#closedFunctionality), and auditory output is provided as non-visual access to closed functionality, and the characters displayed are masking characters,  
the auditory output shall not be a spoken version of the characters entered unless the auditory output is known to be delivered only to a [mechanism for private listening](#mechanismForPrivateListening), or the user explicitly chooses to allow non‑private auditory output.

Note 1: Masking characters are usually displayed for security purposes and include, but are not limited to asterisks representing personal identification numbers.

Note 2: Unmasked character output might be preferred when closed functionality is used, for example, in the privacy of the user's home. A warning highlighting privacy concerns might be appropriate to ensure that the user has made an informed choice.

#### 5.1.3.9 Private access to personal data

Where ICT includes [closed functionality](#closedFunctionality), and auditory output is provided as non-visual access to closed functionality, and the output contains data that is considered to be private according to the applicable privacy policy,  
the corresponding auditory output shall only be delivered through a [mechanism for private listening](#mechanismForPrivateListening) that can be connected without requiring the use of vision, or through any other mechanism explicitly chosen by the user.

Note 1: This requirement does not apply in cases where data is not defined as being private according to the applicable privacy policy or where there is no applicable privacy policy.

Note 2: Non-private output might be preferred when closed functionality is used, for example, in the privacy of the user's home. A warning highlighting privacy concerns might be appropriate to ensure that the user has made an informed choice.

#### 5.1.3.10 Non-interfering audio output

Where ICT includes [closed functionality](#closedFunctionality), and auditory output is provided as non-visual access to closed functionality,  
the ICT shall not automatically play, at the same time, any interfering audible output that lasts longer than three seconds.

#### 5.1.3.11 Private listening volume

Where ICT includes [closed functionality](#closedFunctionality), and auditory output is provided as non-visual access to closed functionality, and the auditory output is delivered through a [mechanism for private listening](#mechanismForPrivateListening),  
the ICT shall provide at least one non-visual mode of operation for controlling the volume.

#### 5.1.3.12 Speaker volume

Where ICT includes [closed functionality](#closedFunctionality), and auditory output is provided as non-visual access to closed functionality, and is delivered through speakers on the ICT,  
a non-visual incremental volume control shall be provided with output amplification up to a level of at least 65 dBA (-29 dBPaA).

Note: For noisy environments, 65 dBA may not be sufficient.

#### 5.1.3.13 Volume reset

Where ICT includes [closed functionality](#closedFunctionality), and auditory output is provided as non-visual access to closed functionality,  
a function that resets the volume to be at a level of 65 dBA or less after every use, shall be provided, unless the ICT is dedicated to a single user.

Note: A feature to disable the volume reset function may be provided in order to enable the single-user exception to be met.

#### 5.1.3.14 Spoken languages

Where ICT includes [closed functionality](#closedFunctionality), and speech output is provided as non-visual access to closed functionality,  
the speech output shall be in the same human language as the displayed [content](#content) provided, except:

1. for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text;
2. where the content is generated externally and not under the control of the ICT vendor, the present clause shall not be required to apply for languages not supported by the ICT's speech synthesizer;
3. for displayed languages that cannot be selected using non-visual access;
4. where the user explicitly selects a speech language that is different from the language of the displayed content.

#### 5.1.3.15 Non-visual error identification

Where ICT includes [closed functionality](#closedFunctionality), and speech output is provided as non-visual access to closed functionality, and an input error is automatically detected,  
the speech output shall identify and describe the item that is in error.

#### 5.1.3.16 Receipts, tickets, and transactional outputs

Where ICT includes [closed functionality](#closedfunctionality), and provides receipts, tickets or other outputs as a result of a self-service transaction,  
output that provides all information necessary to complete or verify the transaction shall be provided through one or more non-visual means that includes auditory output, except information that is printed and that is not needed to complete the transaction, such as receipts, itineraries, maps, etc .

Note: The speech output may be provided by any element of the total ICT system.

### 5.1.4 Functionality closed to text enlargement

Where ICT includes [closed functionality](#closedFunctionality), and any functionality of the ICT is closed to the text enlargement features of [platform](#platformSoftware) or [assistive technology](#assistiveTechnology),  
the ICT shall provide a mode of operation where the text and images of text necessary for all functionality is displayed in such a way that a non-accented capital "H" subtends an angle of at least 0,7 degrees at a viewing distance specified by the supplier.

The subtended angle, in degrees, may be calculated from:

Ψ = (180 x H) / (π x D)

Where:

* ψ is the subtended angle in degrees
* H is the height of the text
* D is the viewing distance
* D and H are expressed in the same units

Note 1: The intent is to provide a mode of operation where text is large enough to be used by most users with low vision.

Note 2: Table 5.1 and Figure 5.1 illustrate the relationship between the maximum viewing distance and minimum character height at the specified minimum subtended angle.

Table 5.1: Relationship between maximum design viewing distance and  
minimum character height at the limit of subtended angle

|  |  |  |
| --- | --- | --- |
| Minimum subtended angle | Maximum design viewing distance | Minimum character height |
| 0,7 degrees | 100 mm | 1,2 mm |
| 200 mm | 2,4 mm |
| 250 mm | 3,1 mm |
| 300 mm | 3,7 mm |
| 350 mm | 4,3 mm |
| 400 mm | 4,9 mm |
| 450 mm | 5,5 mm |
| 500 mm | 6,1 mm |
| 550 mm | 6,7 mm |
| 600 mm | 7,3 mm |

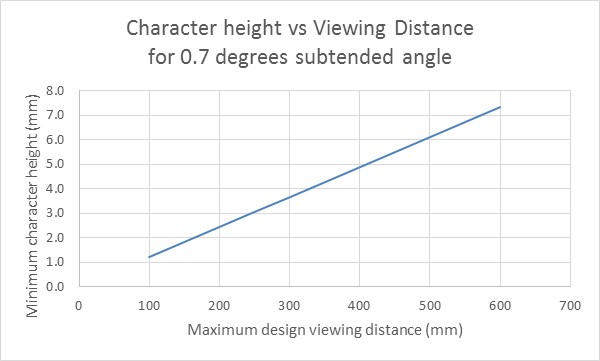


Figure 5.1: Relationship between minimum character height and maximum design viewing distance

### 5.1.5 Visual output for auditory information

Where ICT includes [closed functionality](#closedFunctionality), and auditory information is needed to enable the use of closed functionality of the ICT,  
the ICT shall provide visual information that is equivalent to the auditory output.

Note: This visual information can take the form of captions or text transcripts.

### 5.1.6 Operation without keyboard interface

#### 5.1.6.1 Closed functionality

Where ICT includes [closed functionality](#closedFunctionality), and the functionality is closed to keyboards or keyboard interfaces,

all functionality shall be operable without vision as required by clause 5.1.3.

#### 5.1.6.2 Input focus

Where ICT includes [closed functionality](#closedFunctionality), and the functionality is closed to keyboards or keyboard interfaces, and where input focus can be moved to a [user interface element](#userInterfaceElement),  
it shall be possible to move the input focus away from that element using the same mechanism, in order to avoid trapping the input focus.

### 5.1.7 Access without speech

Where ICT includes [closed functionality](#closedFunctionality), and speech is needed to operate closed functionality of the ICT,  
the ICT shall provide at least one mode of operation using an alternative input mechanism that does not require speech.

### 5.1.8 Identify input purpose (closed functionality) (was 11.1.3.5.2)

Where ICT includes [closed functionality](#closedFunctionality),  
in at least one mode of operation the ICT shall present to the user, in an audio form, the purpose of each input field collecting information about the user when the input field serves a purpose identified in the [WCAG 2.2 Input Purposes for User Interface Components section](https://www.w3.org/TR/WCAG22/" \l "input-purposes).

## 5.2 Activation of accessibility features

Where ICT includes documented [accessibility](#accessibility) features,  
it shall be possible to activate those documented accessibility features that are required to meet a specific need without relying on a method that does not support that need.

## 5.3 Biometrics

Where ICT uses biological characteristics,  
it shall not rely on the use of a particular biological characteristic as the only means of user identification or for control of ICT.

Note 1: Alternative means of user identification or for control of ICT could be non-biometric or biometric.

Note 2: Biometric methods based on dissimilar biological characteristics increase the likelihood that individuals with disabilities possess at least one of the specified biological characteristics. Examples of dissimilar biological characteristics are fingerprints, eye retinal patterns, voice, and face.

## 5.4 Preservation of accessibility information during conversion

Where ICT converts information or communication,  
the ICT shall preserve all documented non-proprietary information that is provided for [accessibility](#accessibility) to the extent that such information can be contained in or supported by the destination format.

## 5.5 Operable parts

### 5.5.1 Means of operation

Where ICT includes [operable parts](#operablePart) that require grasping, pinching, or twisting of the wrist to operate,  
an accessible alternative means of operation that does not require these actions shall be provided.

Note: Note that the definition of [operable parts](#operablePart) includes on-screen and other operable parts provided by software where the only way to achieve some functionality is to use pinching or twisting of the wrist.

### 5.5.2 Operable parts discernibility

Where ICT includes [operable parts](#operablePart),  
the ICT shall provide a means to discern each operable part, without requiring vision and without performing the action associated with the operable part.

Note 1: One way of meeting this requirement is by making the operable parts tactilely discernible.

Note 2: Where physical buttons are arranged in small functional groups, or on-screen buttons are positioned in fixed positions adjacent to tactilely discernible boundaries (such as screen edges or surrounds), their position can be tactilely discerned.

Note 3: Clause 8.4.2.1 “Mechanical operable parts discernibility" makes the provision of tactile identification a requirement and not "one way" of meeting the requirement as it is in the present clause.

## 5.6 Locking or toggle controls

### 5.6.1 Tactile or auditory status

Where ICT includes a locking or toggle control,  
the ICT shall provide at least one mode of operation where the status of the control can be determined either through touch or sound without operating the control.

Note 1: Locking or toggle controls are those controls that can only have two or three states and that keep their state while being used.

Note 2: An example of a locking or toggle control is the "Caps Lock" key found on most keyboards. Another example is the volume button on a pay telephone, which can be set at normal, loud, or extra loud volume.

Note 3: Even though all the above examples relate to hardware toggle controls, this clause also applies to graphical controls in software.

Note 4: For graphical software controls, this clause will usually (unless the ICT is closed for AT) pass if the control conforms with WCAG success criterion 1.3.1 "Information and relationships" (corresponding to clauses 9.1.3.1, 10.1.3.1 and 11.1.3.1. (because the visually presented state of a control is information that, according to WCAG SC 1.3.1, has to be programmatically determinable, and thus possible to render as speech or touch, unless this is prohibited by closed functionality.)

### 5.6.2 Visual status

Where ICT includes a locking or toggle control,  
the ICT shall provide at least one mode of operation where the status of the control can be visually determined when the control is presented.

Note 1: Locking or toggle controls are those controls that can only have two or three states and that keep their state while being used.

Note 2: An example of a locking or toggle control is the "Caps Lock" key found on most keyboards. An example of making the status of a control determinable is a visual status indicator on a keyboard.

Note 3: Even though all the above examples relate to hardware toggle controls, this clause also applies to graphical controls in software.

## 5.7 Key repeat

Where ICT includes a key repeat function that cannot be turned off, and that key repeat will result in the generation of multiple entries of the same alphanumeric data into input fields or into documents:

1. the delay before the key repeat shall be adjustable to at least 2 seconds; and
2. the key repeat rate shall be adjustable down to one character per 2 seconds.

## 5.8 Double-strike key acceptance

Where ICT includes a keyboard or keypad,  
the delay after any keystroke, during which an additional key-press will not be accepted if it is identical to the previous keystroke, shall be adjustable up to at least 0,5 seconds.

## 5.9 Simultaneous user actions

Where ICT includes a mode of operation requiring simultaneous user actions for its operation,  
the ICT shall provide at least one mode of operation that does not require simultaneous user actions to operate the ICT.

Note: Having to use both hands to open the lid of a laptop, having to press two or more keys at the same time or having to touch a surface with more than one finger are examples of simultaneous user actions.

# 6 ICT supporting continuous bidirectional communication

## 6.0 Accessible continuous bidirectional communication operational scenarios

### 6.0.1 Rationale for scenarios (informative)

Clauses 6.2.0.2 to 6.2.0.5 specify a minimum set of operational scenarios in which continuous bidirectional communication typically takes place. To deliver the goal of accessible communications it is necessary to ensure that [applicable accessibility requirement](#applicablerequirement)s defined in clauses 6.1 to 6.6 are met in all [applicable scenario](#applicablescenario)s for the communication described by the scenarios.

Note 1: The scenarios add preconditions to each of the tests in C6.1 to C6.6 to make sure that testing is done in a way that is both effective and practical for each of the different scenarios.

Note 2: The present document concerns only the general accessibility aspects of ICT that is expected to provide access to emergency communications. The detailed aspects of how to ensure accessibility of emergency communications are covered in ETSI TS 103 919 [i,ts103919] and are not further elaborated in the present document. These aspects include but are not limited to addressing, routing, location information provision, provision of emergency communication specific contextual information, invocation of relay services in emergency communications and invocation of other support services in the emergency communication

### 6.0.2 Communication client

Where ICT is, or includes, a [communication client](#communicationclient) that supports continuous bidirectional voice communication with or within a [communication system](#communicationsystem) that supports continuous bidirectional voice communication,  
the communication client shall meet all [applicable 6.1 to 6.6 requirements](#applicablerequirement), when communicating with the communication system.

### 6.0.3 Communication system

Where ICT is, or includes, or is a part of, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication with [communication client](#communicationclient)s of the system,  
the system shall meet all [applicable 6.1 to 6.6 requirements](#applicablerequirement) when communicating with communication clients.

Note: ICT that are component parts of a communication system can be tested by ensuring that that ICT is included in a communication system during testing.

EXAMPLE: The suitability of a home/office internet router for correctly handling RTT communication can be evaluated by ensuring that this router is part of the local ICT that is used to perform a test of RTT communication routed through the continuous bidirectional voice communication system.

### 6.0.4 Communication system that connects to another communication system

Where ICT is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication with one or more other communication systems that support continuous bidirectional voice communication,  
the system shall meet all [applicable 6.1 to 6.6 requirements](#applicablerequirement) when communicating with the other communication systems.

### 6.0.5 Communication system when a communication client is in roaming mode

Where ICT is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication, and a [communication client](#communicationclient) that supports continuous bidirectional voice communication with another [compatible communication system](#compatiblecommunicationsystem), visits and connects to the communication system,  
the system shall meet all [applicable 6.1 to 6.6 requirements](#applicablerequirement) requirements when communicating with the [visiting communication client](#visitingcommunicationclient).

### 6.0.6 Communication client in emergency communications

Where ICT is required to provide, or otherwise provides, emergency communications, and is, or includes, a [communication client](#communicationclient) that supports continuous bidirectional voice communication with or within a [communication system](#communicationsystem) that supports continuous bidirectional voice emergency communication,  
the communication client shall meet [applicable 6.1 to 6.6 requirements](#applicablerequirement), when performing the emergency communication.

### 6.0.7 Communication system that conveys emergency communications

Where ICT is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication in emergency communications with PSAPs,  
the system shall meet all [applicable 6.1 to 6.6 requirements](#applicablerequirement), when performing the emergency communication.

### 6.0.8 Communication system that conveys emergency communications when a visiting client is in roaming mode.

Where ICT is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication in emergency communications with PSAPs, and a [communication client](#communicationclient) that supports continuous bidirectional voice communication with another compatible communication system, visits and connects to the communication system,   
the system shall meet all [applicable 6.1 to 6.6 requirements](#applicablerequirement), when communicating with the visiting communication client and a PSAP in the visited country in emergency communications.

### 6.0.9 Communication system that conveys emergency communications with communications client visiting other country

Where ICT is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication in emergency communications with PSAPs, and a [communication client](#communicationclient) of the ICT that supports continuous bidirectional voice communication, visits another country than the home country,   
the system shall meet [applicable 6.1 to 6.6 requirements](#applicablerequirement) when communicating with the communication client and a PSAP in the visited country in emergency communications.

Note: This scenario is intended for systems which in contrast to the systems of [clause 6.0.8](#_6.0.8_Communication_system) of the present document do not use any roaming technology on call control level. Typical communication systems using the approach of the present clause are VoIP based systems using IP communications in the Internet or other IP networks, carried by mobile, WiFi or fixed technologies.

## 6.1 Audio bandwidth for voice communication

Where ICT provides continuous bidirectional voice communication,  
in order to provide good audio quality, that ICT shall be able to encode and decode two-way voice communication with a frequency range with an upper limit of at least 7 000 Hz.

Note 1: For the purposes of interoperability, support of Recommendation ITU-T G.722 [i.21] is widely used.

Note 2: Where codec negotiation is implemented, other standardized codecs such as Recommendation ITU‑T G.722.2 [i.22] are sometimes used so as to avoid transcoding.

## 6.2 Real-Time Text (RTT)

### 6.2.1 RTT provision

#### 6.2.1.1 RTT functionality

Where ICT provides functionality that allows continuous bidirectional voice communication, and would not require design changes to add input or output hardware to the ICT,  
the ICT shall provide functionality that allows continuous bidirectional [RTT](#realTimeText) communication.

Note 1: The above requirement implicitly requires that ICT that interoperates with other ICT for continuous bidirectional voice communication would interoperate for RTT as well.

Note 2: This requirement includes those products which do not have physical display or text entry capabilities but have the capability to connect to devices that do have such capabilities. It also includes intermediate ICT between the endpoints of the communication.

Note 3: There is no requirement to add: a hardware display, a hardware keyboard, or hardware to support the ability to connect to a display or keyboard, wired or wirelessly, if this hardware would not normally be provided.

Note 4: The definition of real-time text implies support of multiparty RTT communication.

Note 5: Background reading about RTT and a comprehensive reference list is available in ETSI TR 103 708 [i.61].

Note 6: Many other clauses than 6.2 of the present document are valid for RTT implementation.

NOTE 7: [Clause 11.5](#_11.5_Interoperability_with) of the present document presents considerations about use of assistive technology which are also considerations for RTT implementations. In the RTT case, best practice is that new text input can arrive anytime while the user is reading earlier received text and the user is made aware that new text is available while not disturbing the reading of earlier received text

#### 6.2.1.2 Concurrent voice and RTT

Where ICT provides continuous bidirectional voice communication, and supports [RTT](#realTimeText),  
the ICT shall allow concurrent voice and RTT.

#### 6.2.1.3 Single user operations

Where ICT provides continuous bidirectional voice communication, and supports [RTT](#realTimeText),  
the ICT shall allow [single user operations](#singleuseroperation) to act on all [media](#media) during establishment, modifications during the communication and disconnections.

Note: This requirement is of great importance to ensure that a callback resulting from an emergency communication can achieve the same or better level of accessibility as the original emergency call.

### 6.2.2 Display of RTT

#### 6.2.2.1 Distinguishable display

Where ICT supports continuous bidirectional voice communication, and includes [RTT](#realTimeText) presentation capabilities,  
displayed text that originates from different sources, as well as the text that is sent, shall be displayed with their sources indicated and differentiated.

Note 1: The ability of the user to choose between different layouts of the text that is sent, and the text received from the different sources, would allow users to display RTT in a form that works best for them, while still fulfilling the requirement in this clause.

Note 2: This does not require more than a unique identifier, not necessarily a real identity (e.g. Speaker 1 or Speaker 2 would be sufficient if nothing better is known).

#### 6.2.2.2 Active communicator indication

Where ICT supports continuous bidirectional voice communication, and includes [RTT](#realTimeText) send and receive capabilities, and provides speaker indication for voice,  
the ICT shall provide indication of all active communicators including those using RTT.

Note: This is necessary to enable all parties to know who or what is currently communicating, whether it be in RTT or voice.

#### 6.2.2.3 Indication of audio with RTT

Where ICT provides continuous bidirectional voice communication, and supports [RTT](#realTimeText),  
the ICT shall provide a real-time indicator of non-local audio activity on the display.

Note 1: The indicator may be a simple character position on the display that flickers on and off to reflect the varied strength of the audio activity, or presentation of the information in another way that can be both visible to sighted users and presented to deaf-blind users.

Note 2: Without this indication a person who lacks the ability to hear does not know when someone is talking.

#### 6.2.2.4 Presentation of relative time order of text

Where ICT supports continuous bidirectional voice communication, and includes [RTT](#realTimeText) presentation capabilities,  
the ICT shall present the text from each source, including the local source, as blocks of text that are arranged in the order that [RTT text-block termination](#RTTtextblocktermination) occurs. Editing of text causes its termination time to change to the time of the last edited character. Erasure of text causes any remaining preceding text in the same block to belong to a not terminated block.

Note 1: When two blocks of text from the same source occur without an intervening block of text from another source, best practice is to present them together as one block.

Note 2: The requirement is intended to result in an approximate time order for the text presentation. When texts from different parties have been received simultaneously, showing an exact time relation between text entries from different parties is unnecessary and not suitable to maintain readability of the text in most presentation layout alternatives.

Note 3: Presentation aspects of RTT are presented in ETSI TR 103 708 [i.61] clause 7.2.

#### 6.2.2.5 Review of RTT communication contents

Where ICT supports continuous bidirectional voice communication, and includes [RTT](#realTimeText) presentation capabilities,  
the ICT shall provide the ability to review the whole RTT content of the communication, during the communication and after it has ended.

NOTE 1: Best practice is to have the text view scroll with the arrival of new text, but only when the view is fully scrolled to the end of the text display.

NOTE 2: Mechanisms to prevent long-term retention of the RTT text after the communication session may be needed for calls where recording of the real-time communication (speech and RTT) is not allowed.

### 6.2.3 DTMF touch-tone generation during RTT operations

Where ICT is, or includes, a [communication client](#communicationclient), and provides functionality that allows continuous bidirectional voice communication, and supports the generation and transmission of touch-tone signals on voice calls,  
the client shall provide a method for generation and transmission of touch-tone signals for touch-tone characters (0-9,\*,#,A,B,C,D) that is distinct from the method for generating [RTT](#realTimeText) for those same characters, and is compatible with the standard method for sending touch-tones during voice calls.

### 6.2.4 RTT responsiveness

Where ICT is, or includes, a [communication client](#communicationclient), and supports continuous bidirectional voice communication, and supports [RTT](#realTimeText),   
RTT input shall be transmitted to the [ICT network](#ICTNetwork) on which the ICT runs within 500 ms of the time that the smallest reliably composed unit of text entry is available to the ICT for transmission wheree delays due to network performance are not included in the 500 ms limit.

Note 1: The "smallest reliably composed unit of text entry" varies depending on how text is being generated. When typing individual characters, the "smallest reliably composed unit of text entry" would be a character even, if it is composed by multiple keystrokes. For word prediction, it would be a word. For some voice recognition systems - the text may not exit the recognition software until an entire word (or phrase) has been spoken, in which case, the smallest reliably composed unit of text entry available to the ICT would be the word (or phrase). Also, other operations, such as copy-paste, may occasionally cause the unit of text entry to be more than one character.

Note 2: The 500 ms limit allows buffering of characters for this period before transmission so character by character transmission is not required unless the characters are generated more slowly than 1 per 500 ms.

Note 3: A delay of 300 ms, or less, produces a better impression of flow to the user.

Note 4: If there is less than 1-second delay between when a key is pressed and when the character appears on another communications client included in the same communication, this requirement can be deemed as met because that is the user requirement behind this requirement as specified in Recommendation ITU-T F.703 [[i.39]](#REF_ITU_TF703) , and the at least 500 ms time left for the packet with the character to reach the destination is sufficient in network conditions where voice communication show satisfying performance. (see testing [C.6.2.4](#_C.6.2.4_RTT_responsiveness)).

Note 5: Synchronization of [RTT](#realTimeText) with audio and video is achieved when all three media are presented within their respective latency requirements.

### 6.2.5 Adding and erasing of RTT input

Where ICT supports continuous bidirectional voice communication, and includes [RTT](#realTimeText) capabilities, and supports RTT user input,  
the RTT user interface shall provide the functionality to enter new text and to erase text entered in an ongoing communication where the erasure is done from the current end of text without being limited by any new line or other delimiter in the earlier text.

Note 1: Each erase-previous-character operation erases a complete delimiter or text element (whether 1 or 2 characters) so that local and remote presentation is kept synchronised.

Note 2: The intention of this requirement is to enable entry of text and to allow corrections, which may include just erasure or erasure and entry of replacing text.

Note 3: "Functionality to erase text" includes both manual erasure, enabling replacement with corrected text, as well as automatic correction mechanisms such as automatic spelling correction or corrections done by speech-to-text and other such text-generating mechanisms that might perform auto-correction.

Note 4: It is best practice to mark sections where the text has changed.

Note 7: See clause [6.2.2.4](#_6.2.2.4_Presentation_of) of the present document about presentation aspects of adding and erasing text.

### 6.2.6 Processing rate of RTT

Where ICT supports continuous bidirectional voice communication, and includes [RTT](#realTimeText) capabilities,  
the ICT shall have the capacity to receive and present RTT from at least 3 individuals typing at a rate of at least 30 characters per second for a total of at least 90 characters per second, whether it comes in on one connection (e.g. from a bridge) or separate connections.

### 6.2.7 Character representation

Where ICT supports continuous bidirectional voice communication, and includes [RTT](#realTimeText) capabilities,  
the ICT shall be capable of handling at least a subset of ISO/IEC 10646 [i.52] that includes at least;

* the Latin-1 part;
* the writing direction(s) and the characters for the languages of the regions in which the ICT is intended to be used;
* any emoji characters supported by the underlying platform;
* the ISO/IEC 10646 “replacement character” (HEX:FFFD) used for indication of unsupported and lost characters, including emojis and;
* any characters used by the presentation protocol.

### 6.2.8 RTT input methods

Where ICT is, or includes, a [communication client](#communicationclient), and supports continuous bidirectional voice communication, and supports [RTT](#realTimeText),  
the client shall provide RTT input methods in all ways available for general text input by the ICT.

### 6.2.9 RTT activation

Where ICT supports continuous bidirectional voice communication, and includes [RTT](#realTimeText) capabilities,  
it shall be possible to activate RTT both when initiating and answering a call and to activate RTT during the call by any RTT-enabled endpoint.

**Note:** The activation could be by a user, an automatic procedure in a user terminal, a non-human process, or a setting in a conference call.

### 6.2.10 RTT interoperability

Where ICT provides functionality that allows continuous bidirectional voice communication, and connects to another provider’s ICT that allows continuous bidirectional voice communication,  
the ICT’s documentation shall contain information on the main specifications by which [RTT](#realTimeText) is implemented in a manner that allows the RTT on the ICT to interoperate with the other provider's ICT that the ICT interoperates with for voice, using one of the following options:

1. Any set of specifications for RTT communication that would fulfil the RTT requirements in the present document that is mutually agreed upon between providers of the ICT and the providers of any other ICT with which the ICT interoperates for continuous bidirectional voice communication.
2. ITU-T Recommendation T.140 [i.36] for functions including coding and presentation and RFC 4103 [i.13] updated by RFC 9071 [i.51] for other aspects of RTT communication.

Note 0: As per the preconditions, documentation is only required by the present clause when ICT connects to ICT from a different provider.

Note 1: If there is no agreement to use some other standard, then clause 6.2.10 allows any ICT to fulfil clause 6.2.10 by implementing option b). This is the fallback option to use when no other method has been agreed on, and it might serve as a ‘safe harbour’ for conforming to clause 6.2.10 when no agreement can be reached.

Note 2: ICT that provides Emergency communication with continuous bidirectional voice is an important case of an operational scenario where [communication system](#communicationsystem)s are required to interoperate. See clause 13.3.

Note 3: A number of other factors are important to also be agreed automatically or by external means in the communication system interface for RTT interoperability to work, such as security mechanisms, addressing, NAT-traversal mechanisms, transport method for session control, etc.

Note 4: Specifications for RTT implementation are provided for a number of technologies. The following list provides an overview of the situation at the time of authoring the present document. It is presented here as a guide for achieving interoperability. Almost all of these specifications make use of ITU-T Recommendation T.140 [i.36] for functions including coding and presentation:

1. General VoIP and Multimedia communication: IETF, providing standards for Voice Over IP (VOIP) and Multimedia communications over IP based on the Session Initiation Protocol (SIP) IETF RFC 3261 [i.49], has published IETF RFC 4103 [i.13] for session establishment and transport of RTT over RTP IETF RFC 3550 [i.50] and its update RFC 9071 [i.51] for multiparty use.
2. IP Multimedia Sub-System (IMS): 3GPP, providing standards for mobile communication systems, including IP Multimedia Sub-System (IMS) has standardised the Multimedia Telephony concept, for communications with voice, video and RTT using the set of protocols specified in ETSI TS 126 114 (=3GPP TS 26.114) [i.10] to create the services including RTT and Total Conversation services specified in TS 122 173 (=3GPP TS 22.173) [i.11]. Multimedia Telephony is specified to use IETF RFC 4103 [i.13] updated by IETF RFC 9071[i.51] for session establishment and transport of RTT over RTP or the RTT based on WebRTC Data Channel Technologies. Details of the use of these variants can be found in ETSI TR 126 982 [i.43]. It should be noted that 3GPP and GSMA use the following varying terms for RTT: GTT, Global Text Telephony, GTT-IP, RTT, real time text, and text.
3. GSMA, providing selected profiles of standards for implementing globally interoperating mobile communications services has in GSMA PRD IR.92 [i.44] specified how to apply ETSI TS 126 114 [i.10] to implement RTT and Voice over LTE (VoLTE) and in GSMA PRD IR.94 [i.45] Video over LTE (ViLTE) in 4G mobile systems.. A similar document is published for RTT, voice and video over 5G in GSMA NG.114 [i.45]. RTT is specified in these documents in Annex B.2 to use ETSI TS 126 114 [i.10] for session establishment and transport of RTT.
4. Web technologies: For communication in Web Technologies, W3C and IETF have created the WebRTC concept where the Reliable WebRTC Data channel concept RFC 8831[i.56] in its section 3.2 use case U-C 5 is recommended to be used for RTT. The use of WebRTC Data Channels in web pages and apps is specified in W3C WebRTC: Real-Time Communication in Browsers [i.57].
5. Emergency communications: An interface to IP based emergency communications is specified in TS 103 479 [i.47], making use of IETF RFC 4103 [i.13] updated by IETF RFC 9071 [i.51] for RTT. A corresponding standard exists for North America. For emergency apps, ETSI TS 103 478 [i.46] is specified to implement RTT as specified in ETSI TS 103 871 [i.48]. The use of these standards for accessible and interoperable emergency communications including the use of RTT is specificed in ETSI TS 103 919 [i.55]
6. Relay services: ETSI ES 202 975[i.5] specifies in its annexes A and B interfaces to relay services, referring to the present document for specific technologies.

Note 5: Analogue Text telephony is a legacy text communication concept providing functionality to some degree similar to RTT in circuit-switched fixed and mobile technologies. There are 6 variants for fixed lines, collected in ITU-T Recommendation V.18 [i.23], and one for circuit-switched 2G and 3G mobile technologies specified in ETSI TS 126 226 [i.54]. Interworking between these technologies and RTT can be achieved to some degree but with severe functional limitations such as no support for multiparty text communication, need for gateways for character conversion and buffering the much faster RTT text input to accomodate the slower rate of analog technologies, clashes due to lack of bi-directional support, and no possibility to use voice while text is transmitted. The differences can also cause confusion to users unaware of the differences. Details about the limitations can be found in the references in the present note and in IETF RFC 5194 [i.64] section 6.2.5. Considering these limitations, Analogue Text telephony does not provide a working (additional) sensory channel.

Note 6: For applying option b) it can be emphasized that the fallback method for multiparty mixing and presentation of RTT in multi-party unaware clients specified in IETF RFC 9071 [i.54] sections 2.2 and 4.2 does not provide a satisfactory user experience and is discouraged from regular use.

## 6.3 Caller ID

Where ICT provides caller identification or other identification functions,  
the caller identification and other identification functions shall be available in text form as well as being [programmatically determinable](#programmaticallyDeterminable), unless the functionality is closed.

## 6.4 Alternatives to voice-based services

Where ICT provides voice mail, auto-attendant, or interactive voice response facilities,  
the ICT shall offer users a means to access the information and carry out the tasks provided by the ICT without the use of hearing or speech.

Note 1: Tasks that involve both operating the interface and perceiving the information would require that both the interface and information be accessible without use of speech or hearing.

Note 2: Solutions capable of handling audio, RTT and video media could satisfy the above requirement.

## 6.5 Video communication

### 6.5.1 General (informative)

Clause 6.5 (Video communications) provides performance requirements that support users who communicate using sign language and lip-reading. For these users, good usability is achieved with a resolution of at least Quarter Video Graphics Array (QVGA, 320 x 240), a frame rate of 20 frames per second and over, with a time difference between speech audio and video that does not exceed 100 ms.

Increasing the resolution and frame rate further improves both sign language (especially finger spelling) and lipreading, with frame rate being more important than resolution.

Time differences between audio and video (asynchronicity) can have a great impact on lip-reading - with video that lags behind audio having greater negative effect.

End-to-end latency can be a problem in video (sign) communication. Overall delay values below 400 ms are preferred, with an increase in preference down to 100 ms. Overall delay depends on multiple factors, including e.g. network delay and video processing. For this reason a testable requirement on minimum values for overall delay cannot be produced.

Note: Recommendation ITU‑T F.703 [i.37] defines and gives requirements for Total Conversation that relate to the integration of audio, RTT and video in a combined continuous bidirectional communication.

### 6.5.2 Resolution

Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication,  
the ICT:

1. shall support at least QVGA resolution;
2. should preferably support at least VGA resolution.

### 6.5.3 Frame rate

Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication,  
the ICT:

1. shall support a frame rate of at least 20 Frames Per Second (FPS);
2. should preferably support a frame rate of at least 30 Frames Per Second (FPS) with or without sign language in the video stream.

### 6.5.4 Synchronization between audio and video

Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication,  
the ICT shall ensure that voice is received by the user not earlier than 90 ms before and not later than 185 ms after the corresponding video is presented to the user.

Note 1: The delays are specified in Recommendation ITU-T P.1305: "Effect of delays on telemeeting quality" [i.63].

Note 2: Recent research shows that, if audio leads the video, the intelligibility suffers much more than the reverse.

NOTE 3: Verification material and methods are described in ITU-T H-series Supplement 1 [i.67], clause 6.

### 6.5.5 Visual indicator of audio with video

Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication,  
the ICT shall provide a real-time visual indicator of audio activity.

Note 1: The visual indicator may be a simple visual dot or LED, or other type of on/off indicator, that flickers to reflect audio activity.

Note 2: Without this indication a person who lacks the ability to hear does not know when someone is talking.

### 6.5.6 Speaker identification with video (sign language) communication

Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication, and provides speaker identification for voice users,  
the ICT shall provide a means for speaker identification for real-time signing and sign language users once the start of signing has been indicated.

Note 1: The speaker ID can be in the same location as for voice users for multiparty calls.

Note 2: This mechanism might be triggered manually by a user, or automatically where this is technically achievable.

## 6.6 Alternatives to video-based services (recommendation)

Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication, and provides answering machine, auto attendant or interactive response facilities,  
the ICT should offer users a means to access the information and carry out the tasks related to these facilities:

1. for audible information, without the use of hearing;
2. for spoken commands, without the use of speech;
3. for visual information, without the use of vision.

Note: Solutions capable of generating real-time captions or handling RTT could satisfy the above requirement.

## 6.7 Total conversation provision

Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video functionality,  
the ICT shall provide total conversation by also including RTT capability that conforms to the requirements of [clause 6.2](#_6.2_Real-Time_Text), voice that conforms to [clause 6.1](#_6.1_Audio_bandwidth), and video that conforms to [clause 6.5](#_6.5_Video_communication).

# 7 ICT with video capabilities

## 7.1 Caption processing technology

### 7.1.1 Captioning playback

Where ICT displays video with synchronized audio,  
the ICT shall have a mode of operation to display the available [captions](#caption). Where closed captions are provided as part of the [content](#content), the ICT shall allow the user to choose to display the captions.

Note 1: Captions may contain information about timing, colour and positioning. This caption data is necessary for caption users. Timing is used for caption synchronization. Colour can be used for speaker identification. Position can be used to avoid obscuring important information.

Note 2: If a Braille device is connected, the ICT should provide an option to display captions on the Braille device.

Note 3: Clause 7.1.1 refers to the ability of the player to display captions. Clauses 9.1.2.2, 10.1.2.2 and 11.1.2.2 refer to the provision of captions for the content (the video).

### 7.1.2 Captioning synchronization

Where ICT displays video with synchronized audio, and displays [captions](#caption),  
the mechanism to display captions shall preserve synchronization between the audio and the corresponding captions as follows:

* Captions in recorded material: within 100 ms of the time stamp of the caption.
* Live captions: within 100 ms of the availability of the caption to the player.

### 7.1.3 Preservation of captioning

Where ICT transmits, converts, or records video with synchronized audio,  
the ICT shall preserve [caption](#caption) data such that the captions can be displayed in a manner consistent with clauses 7.1.1 and 7.1.2.

Note: Additional presentational aspects of the text such as screen position, text colours, text style and text fonts may convey meaning, based on regional conventions. Altering these presentational aspects could change the meaning and should be avoided wherever possible.

### 7.1.4 Captions characteristics

Where ICT displays video with synchronized audio, and displays [captions](#caption),  
the ICT shall provide a way for the user to adapt the displayed characteristics of captions to their individual requirements, except where the captions are displayed as unmodifiable characters.

Note 1: Defining the background and foreground colour of captions, font type, size, opacity of the background box of captions, and the contour or border of the fonts can contribute to meeting this requirement.

Note 2: Captions that are bitmap images are examples of unmodifiable characters.

### 7.1.5 Spoken interlingual subtitles

Where ICT displays video with synchronized audio, and provides interlingual subtitles,  
the ICT shall have a mode of operation to provide a spoken output of [interlingual subtitles](#interlingualSubtitles), except where the [content](#content) of the displayed [interlingual subtitles](#interlingualSubtitles) is not [programmatically determinable](#programmaticallyDeterminable).

Note 1: Being able to manage speech output volume for spoken [interlingual subtitles](#interlingualSubtitles) independently from general ICT speech is preferable for most users. That is possible when the audio file with spoken [interlingual subtitles](#interlingualSubtitles) is delivered in a separate audio track and mixed in the end users device.

Note 2: Presenting spoken [interlingual subtitles](#interlingualSubtitles) in synchronization with the displayed subtitles improves understandability of the subtitles.

Note 3: Providing [interlingual subtitles](#interlingualSubtitles) as separate text-streams, facilitates converting the respective texts into speech.

Note 4: [Interlingual subtitles](#interlingualSubtitles) that are bitmap images are examples where the content content that has generally not been [programmatically determinable](#programmaticallyDeterminable), but this is changing.

## 7.2 Audio description technology

### 7.2.1 Audio description playback

Where ICT displays video with synchronized audio,  
the ICT shall provide a mechanism to select and play available [audio description](#audioDescription) to the default audio channel.

Where video technologies do not have explicit and separate mechanisms for audio description, an ICT is deemed to satisfy this requirement if the ICT enables the user to select and play several audio tracks.

Note 1: In such cases, the video content can include the audio description as one of the available audio tracks.

Note 2: Audio descriptions in digital media sometimes include information to allow descriptions that are longer than the gaps between dialogue. Support in digital media players for this "extended audio description" feature is useful, especially for digital media that is viewed personally.

### 7.2.2 Audio description synchronization

Where ICT displays video with synchronized audio, and has a mechanism to play [audio description](#audioDescription),  
the ICT shall preserve the synchronization between the audio/visual [content](#content) and the corresponding audio description.

### 7.2.3 Preservation of audio description

Where ICT transmits, converts, or records video with synchronized audio,  
the ICT shall preserve [audio description](#audioDescription) data such that the audio description can be played in a manner consistent with clauses [7.2.1](#_7.2.1_Audio_description) and [7.2.2](#_7.2.2_Audio_description).

## 7.3 User controls for captions and audio description

Where ICT displays video with synchronized audio, and has control over the presentation of subtitles and audio description,  
the ICT shall provide at least one [shortcut method](#shortcutmethod) to activate and deactivate the presentation of those subtitles and audio description that meets the requirements of the present document.

Note 1: It is best practice for ICT to include additional mechanisms to enable the user to select whether subtitles and audio description are turned on or off by default.

Note 2: There could be separate [shortcut method](#shortcutmethod)s for activating and deactivating these functions, or shortcut methods that toggle these functions on or off could also be used.

EXAMPLE: Spoken commands, dedicated buttons, existing buttons that the user choses to be re-mapped to perform these functions or long presses of existing buttons are examples of [shortcut methods](#shortcutmethod) that could meet this requirement.

# 8 Hardware

## 8.1 General

### 8.1.1 Generic requirements (informative)

The "generic requirements" of clause 5 also apply to ICT that is hardware.

### 8.1.2 Standard connections

Where ICT is, or includes, hardware, and provides input or output device connection points,  
the ICT shall provide at least one input and/or output connection that conforms to an industry standard non-proprietary format, directly or through the use of commercially available adapters.

Note 1: The intent of this requirement is to ensure compatibility with assistive technologies by requiring the use of standard connections on ICT.

Note 2: The word connection applies to both physical and wireless connections.

Note 3: Current examples of industry standard non-proprietary connections are USB, Bluetooth.

### 8.1.3 Colour

Where ICT is, or includes, hardware, and colour is used on the hardware to convey information,  
colour shall not be used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

## 8.2 Hardware products with speech output

### 8.2.1 Speech volume gain

#### 8.2.1.1 Speech volume range

Where ICT is, or includes, hardware, and has speech output,  
the ICT shall provide a means to adjust the speech output volume level over a range of at least 18 dB.

Note: Fixed-line handsets and headsets fulfilling the requirements of ANSI/TIA-4965 [i.2] are deemed to comply with this requirement.

#### 8.2.1.2 Incremental volume control

Where ICT is, or includes, hardware, and has speech output, and its volume control is incremental,  
the ICT shall provide at least one intermediate step of 12 dB gain above the lowest volume setting.

### 8.2.2 Magnetic coupling

#### 8.2.2.1 Fixed-line devices

Where ICT is, or includes, hardware, and has speech output, and is a fixed-line communication device that is normally held to the ear,  
the ICT shall provide a means of magnetic coupling which meets the requirements of ETSI ES 200 381-1 [2] and shall carry the "T" symbol specified in ETSI ETS 300 381 [1].

Note 1: ICT fulfilling the requirements of TIA-1083-A [i.24] is deemed to comply with the requirements of this clause.

Note 2: Magnetic coupling is also known as inductive coupling for T-coil.

#### 8.2.2.2 Wireless communication devices

Where ICT is, or includes, hardware, and has speech output, and is a wireless communication device that is normally held to the ear,  
the ICT shall provide a means of magnetic coupling to hearing technologies which meets the requirements of ETSI ES 200 381-2 [3].

Note: ICT fulfilling the requirements of ANSI/IEEE C63.19 [i.1] is deemed to comply with the requirements of this clause.

## 8.3 Stationary ICT

### 8.3.0 General (informative)

The present document defines the dimensions for accessing [stationary hardware ICT](#stationaryHardwareICT) that can be placed in a built environment, but does not define the dimensions of the built environment in general.

The scope includes stationary ICT, of which floors and circulation spaces are "an integral part" (typically kiosks and cabins), and where there are external reach ranges relevant for operating the stationary ICT.

Clauses 8.3.2 to 8.3.4 specify mandatory limits for the maximum and minimum height of operable parts and displays. Dimensions shown in Figure 53 and described 5.5.4 "Height and location of directional and functional signs"of ISO 21542:2021 [i.36], suggest that displays should be located between 1 200 mm and 1 600 mm where they are easy to approach lead to the following conclusions:

* A height range for at least one type of operable part being between 800 mm to 1100 mm
* Part of the active area of at least one of each type of operable parts being within this height range
* Minimum and maximum heights of displays being between 800 mm and 1600 mm

Clauses 8.3.2 to 8.3.4 specify mandatory limits for the maximum and minimum height of operable parts and displays based on these derivations from ISO 21542:2021 [i.36].

Knee and toe space is specified in clause 8.3.3.4.

Note 1: According to ISO 21542 signage for reading close up should be placed at a height of 1200 mm to 1600 mm and displays shall be placed 800 mm to 1100 mm above floor, in combination this effectively leads to 800 mm to 1600 mm above the floor.

### 8.3.1 Forward or side reach

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT),  
the stationary hardware shall meet either clause 8.3.2 or clause 8.3.3.

Note 1: This does not preclude meeting both clauses.

Note 2: Physical access to stationary ICT is dependent on the dimensions of both the ICT and the environment in which it is installed and operated. Clause 8.3 does not apply to the accessibility of the physical environment external to the ICT.

### 8.3.2 Forward reach

#### 8.3.2.1 Unobstructed forward reach for operable parts

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and no part of it obstructs the forward reach,  
at least one of each type of [operable part](#operablePart) shall be located between 800 mm and 1100 mm above the floor of the [access space](#accessspace), at a horizontal distance of 450 mm from the forward-most reference point shown in Figure 8.1.

Note: According to the Anthropometry of Wheeled Mobility Project [i.65], 65 % of participants can reach operable elements when these are placed maximum 1100 mm above floor, and 0 mm horizontally from the reference point. Reducing the horizontal distance by 450 mm means that the percentage of participants able to reach the operable parts increases to approximately 99 %.

#### 8.3.2.2 Forward reach display location

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT),  
displays shall be placed 800 mm to 1600 mm above the floor of the [access space](#accessspace). This is shown in Figure 8.1.

Note: Where a display includes operable parts, and there are not at least one of each type of operable part located according to applicable forward reach clause, the height of the display would need to be reduced below the height of the present clause to ensure that the display's operable parts meet the applicable forward reach clause (8.3.2.1 in this case).

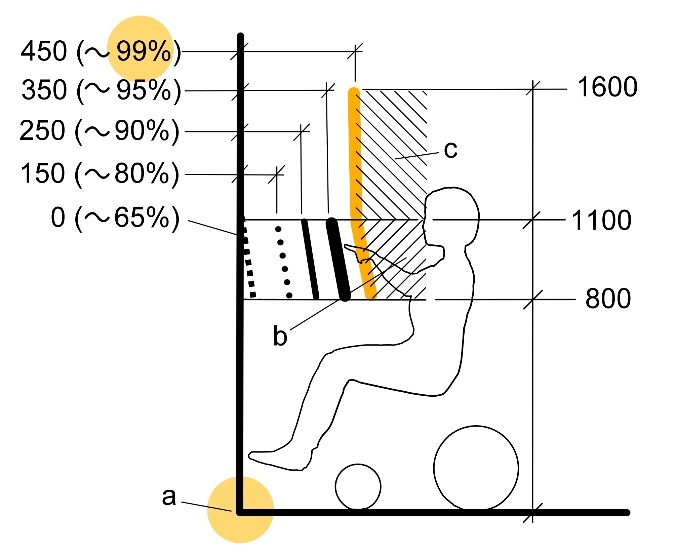


Figure 8.1: Forward reach and location of operable parts and displays

**Key**

1. Anterior-most reference point at floor level of manual and power wheelchairs, power scooters, or toes as reference point.
2. Forward high and low reach from 800 mm to 1100 mm above floor with example operable parts placed 450 mm horizontally from the reference point. Location of displays.
3. Location of displays

Figure 8.2 shows the dimensions required for forward reach and display location on a very simple example of a stationary ICT.

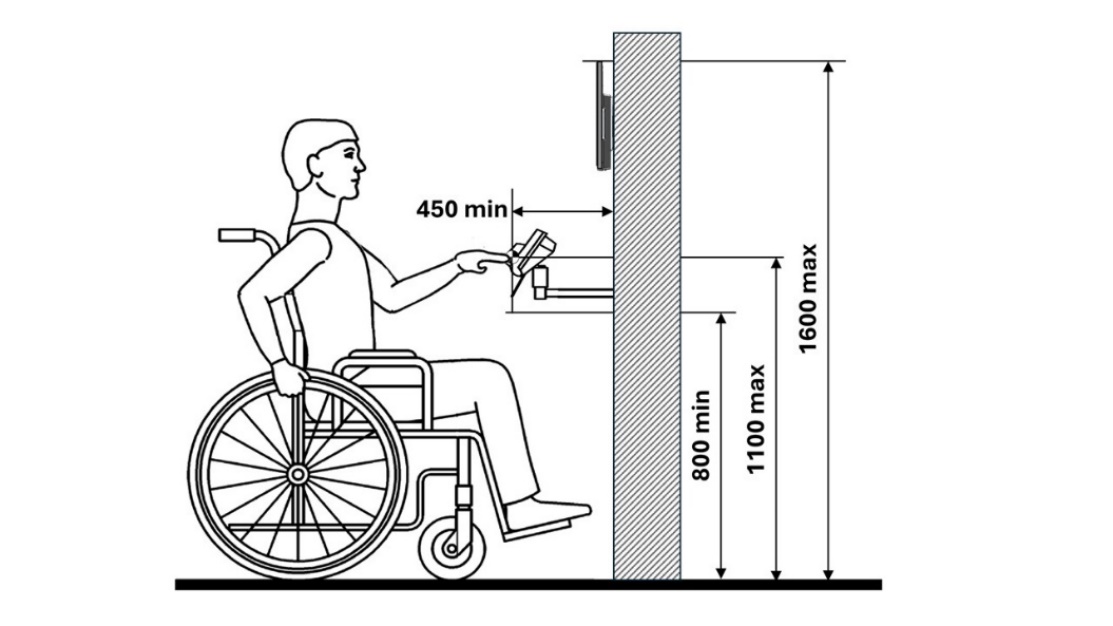


Figure 8.2: Example forward reach and display location

#### 8.3.2.3 Obstructed forward reach

##### 8.3.2.3.1 Clear space underneath an obstruction

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has an obstruction that is an integral part of the ICT, and the obstruction hinders the access to any type of operable part,  
the stationary hardware shall provide a clear space which extends beneath the obstructing element for a distance not less than the required reach depth over the obstruction.

Note: Ensuring that there will be unhindered "access to any type of operable part" guarantees that a user will be able access at least one of each type of operable part.

##### 8.3.2.3.2 Obstructed forward reach range

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has an obstruction that is an integral part of the ICT, and the obstruction is less than 400 mm,  
the forward reach to at least one of each type of [operable part](#operablePart) shall be no higher than 1 100 mm and no lower than 800 mm above the floor contact reference point of the ICT. This is shown in Figure 8.3.

Note: Displays without any operable parts are shown in Figure 8.3 within the same height range as specified in [clause 8.3.2.](#_8.3.2.2__Forward)2. Where there is not at least one of each type of operable part located according to applicable reach clause, the height of a display with operable parts will need to be reduced to ensure that the display's operable parts meet the applicale reach range clause.

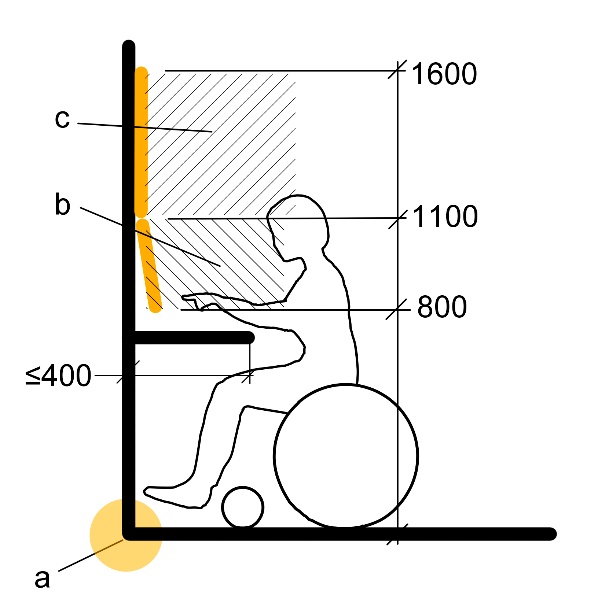


Figure 8.3: Obstructed forward reach

**Key**

1. Anterior-most point at floor level of mobility device or toes, as reference point for the location of ICT operable parts, displays, knee and toe space.
2. Location of at least one accessible operable part of each type. Location of displays.
3. Location of displays.

### 8.3.3 Side reach

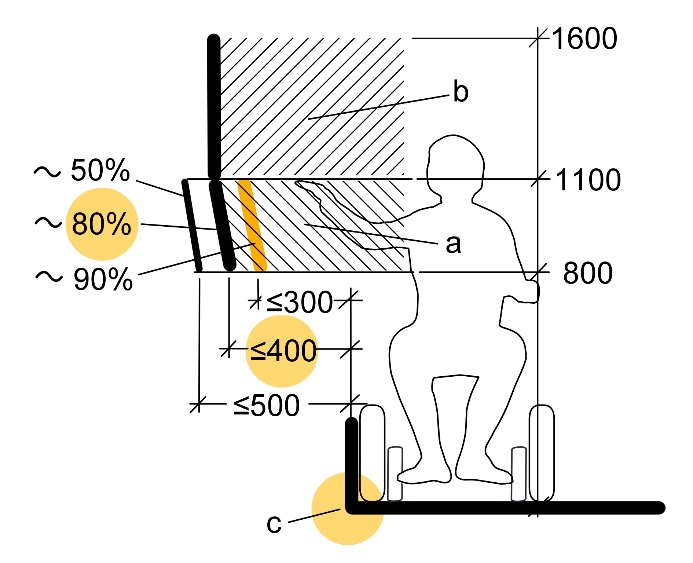
#### 8.3.3.1 Unobstructed high and low side reach

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and the side reach is unobstructed or obstructed by an element that is an integral part of the ICT,  
at least one of each type of [operable part](#operablePart) shall be placed within a low reach of 800 mm to a high reach of 1 100 mm above the floor of the [access space](#accessspace), at a horizontal distance of a maximum of 400 mm from the lateral-most point of the mobility device. This is shown in Figure 8.4.

Note 1: According to the Anthropometry of Wheeled Mobility Project [i.65], approximately 80 % of participants can reach operable elements using a side reach when the operable elements are placed minimum 800 mm and maximum 1 100 mm above floor, and maximum 400 mm horizontally from the reference point.

Note 2: Privacy screens may render side-approach-only stationary ICT screens difficult to read when a person is seated in a wheelchair. Side-approach-only stationary ICT may also impede dual-handed interaction, keyboard typing, insertion and retrieval of cash, and retrieval of tickets when seated in a wheelchair. ICT allowing for a forward approach for 95 % or more users of manual wheelchairs, power wheelchairs, and power scooters is recommended.

Note 3: The [clause 8.3.2.2](#_8.3.2.2__Forward) requirement for display location is unaffected by whether reach is obstructed, unobstructed, front, or side reach. Where the display has operable parts, and there is not at least one of each type of operable part located according to applicable reach clause, the height of a display would need to be reduced below the height specified in clause 8.3.2.2 to ensure that the display's operable parts meet clause 8.3.3.1.



**Figure 8.4: High and low side reach**

**Key**

1. Lateral-most point at floor level of mobility device, as reference point for placement of ICT operable parts, displays, knee and toe space.
2. Location of at least one accessible operable part of each type, and location of displays.
3. Location of displays.

#### 8.3.3.2 Obstructed side reach

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has an obstruction that is an integral part of the ICT,  
the ICT shall be designed so that:

1. the height of the obstruction is less than 800 mm;
2. the depth of the obstruction is less than 400 mm and that;
3. the obstructed high reach to at least one of each type of [operable part](#operablePart) is no higher than 1 100 mm above the floor of the [access space](#accessspace).

This is shown in Figure 8.5.

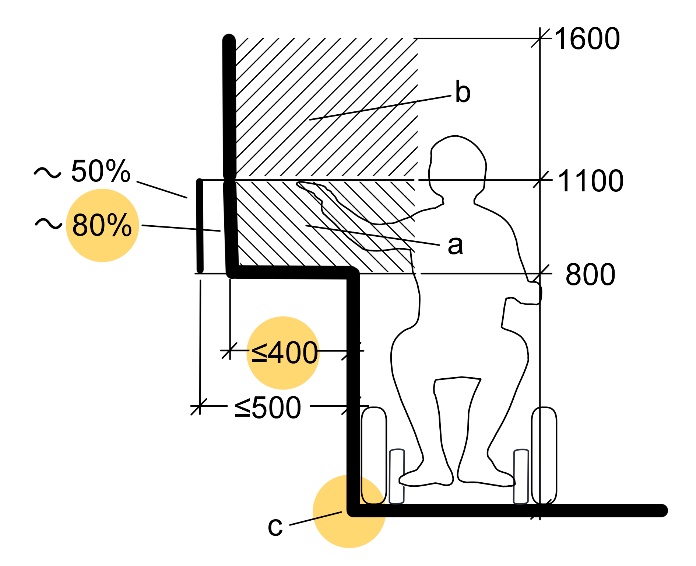


Figure 8.5: Obstructed high side reach

**Key**

1. Location of at least one accessible operable part of each type, and location of displays.
2. Location of displays.
3. Lateral-most point at floor level of mobility device, as reference point for placement of ICT operable

### 8.3.4 Knee and toe clearance

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has an obstacle that is an integral part of the ICT, and the space under the obstacle is part of [access space](#accessspace),  
the ICT shall be designed so that:

1. the clearance shall be at least 900 mm wide;
2. the knee clearance height shall be at least 700 mm, measured vertically from floor of the [access space](#accessspace);
3. the toe space clearance height shall be at least 350 mm, measured vertically from floor of the [access space](#accessspace);
4. the knee space depth shall be maximum of 300 mm;
5. the toe space depth shall be no more than 100 mm, measured horizontally from forward-most reference point shown in Figure 8.6.

This is shown in Figure 8.6.

Note: According to the Anthropometry of Wheeled Mobility Project [i.65], these knee and toe clearances accommodate approximately 95 % of users.

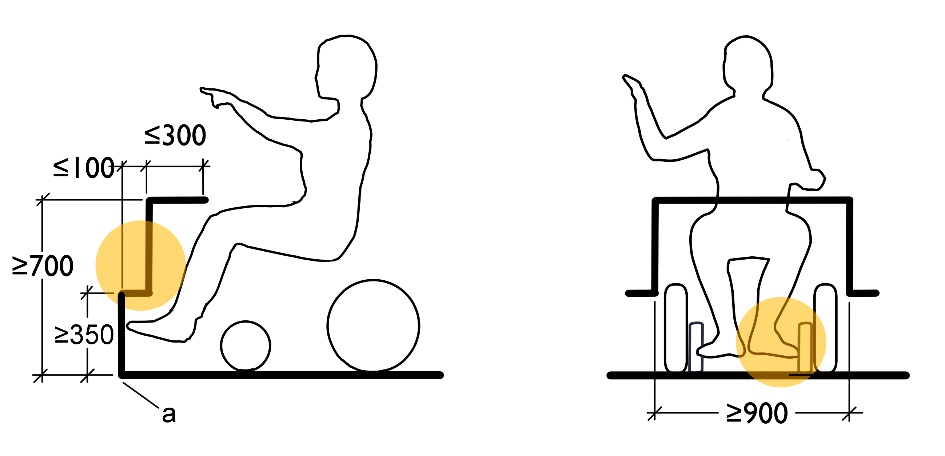


Figure 8.6: Knee and toe clearances

Key

1. Anterior-most point at floor level of a wheelchair or toes as reference point.

Figurre 8.7 illustrates an example of an ICT that includes a bulky mechanism underneath the work surface that is essential for the ICT's operation (e.g. a self-service checkout system). Given the 700 mm knee clearance requirement in the present clause, a typical work surface might be about 800 mm, which would allow the full range of possible locations for operable parts and screens. In this example, the work surface height is 850 mm, which still meets the requirements of the present document (it simply limits the range of heights within which operable parts may be located).

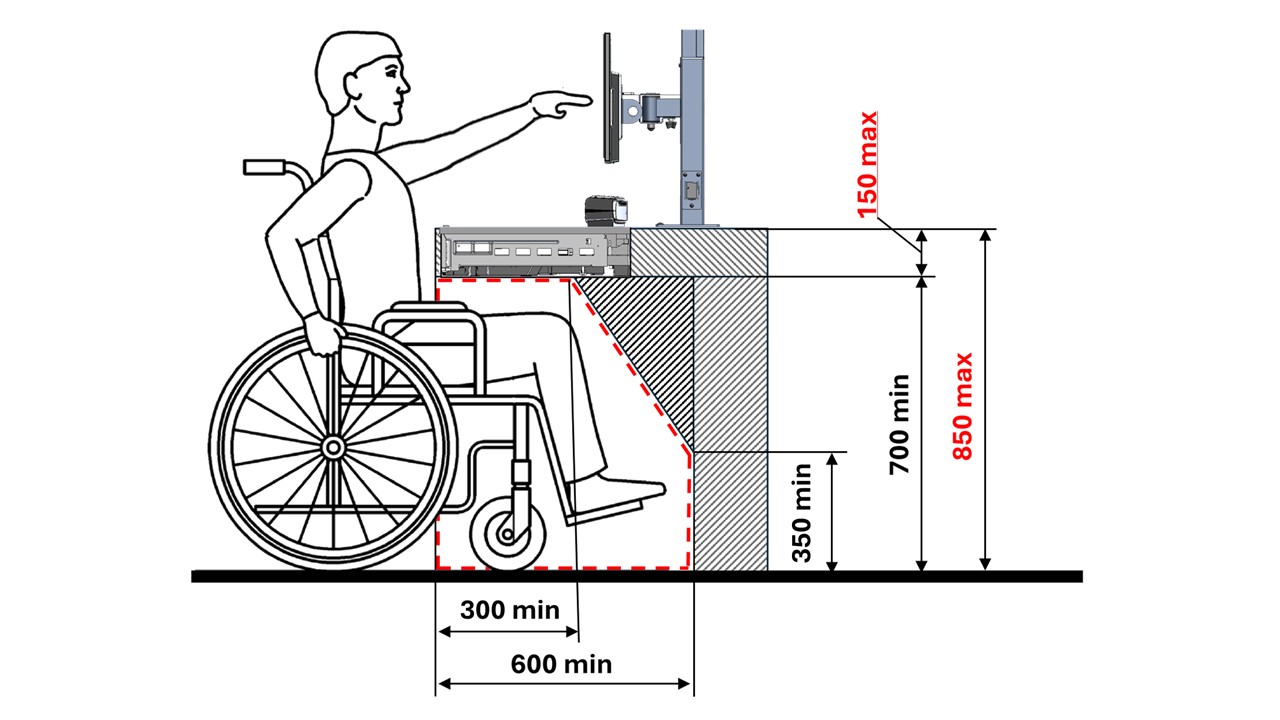


Figure 8.7: Knee and toe clearances

### 8.3.5 Floor or ground space

#### 8.3.5.1 Change in level

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has a floor within it,  
then any change of floor level within it or entering it shall be ramped with a slope no steeper than 1:48.

Exceptions:

1. If the change in floor level is less than or equal to 6,4 mm the change may be vertical as shown in Figure 8.8.
2. If the change in floor level is less than or equal to 13 mm the change may have a slope not steeper than 1:2 as shown in Figure 8.9.

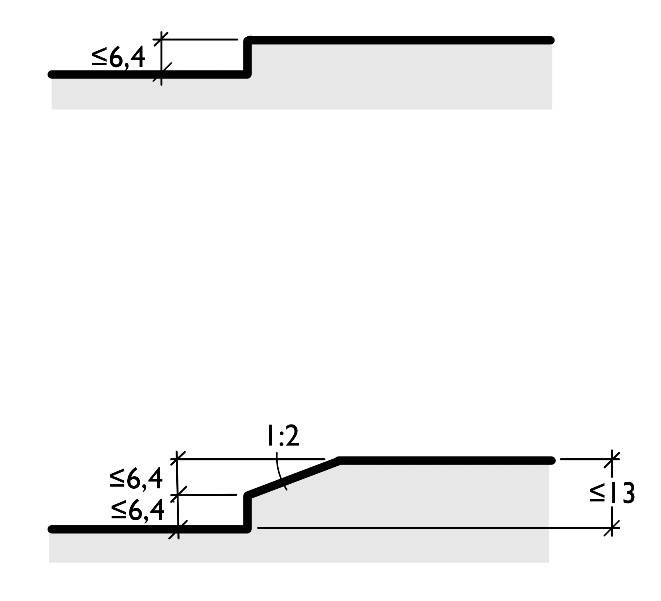


Figure 8.8: Vertical change in level

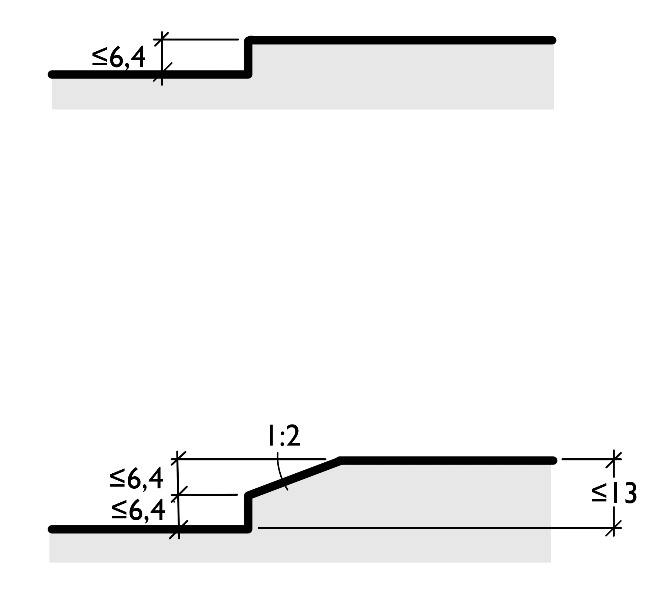


Figure 8.9: Bevelled change in level

#### 8.3.5.2 Clear floor or ground space

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has an operating area within it,  
the stationary hardware shall provide a clear floor area that has the minimum dimensions of 800 mm by 1 300 mm from which to operate the ICT. This is shown in Figure 8.10.

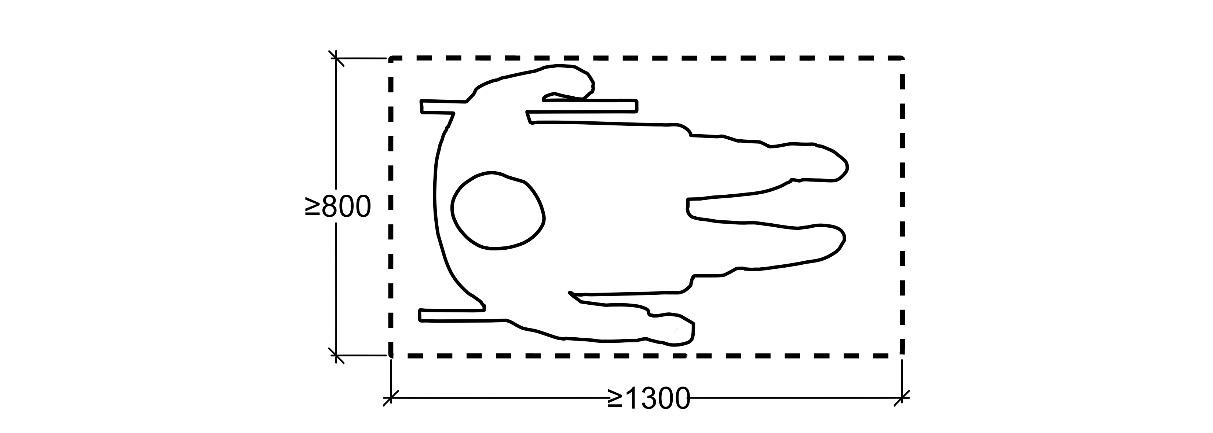


Figure 8.10: Clear floor or ground space (ISO 21542:2021)

#### 8.3.5.3 Approach

##### 8.3.5.3.1 General

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has an [access space](#accessspace) within it,  
at least one full side of the space shall be unobstructed.

##### 8.3.5.3.2 Forward approach

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has an operating area that is inside a space bounded on 3 sides within the ICT, and the space is deeper than 250 mm, and where a forward approach is necessary,  
the dimension of the [access space](#accessspace) shall be a minimum of 900 mm wide. This is shown in Figure 8.11.

Et billede, der indeholder diagram, linje/række, skitse, tegning

Automatisk genereret beskrivelse

Figure 8.11: Manoeuvring Clearance in a space bounded on 3 sides, Forward Approach

##### 8.3.5.3.3 Parallel approach

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and has an operating area that is inside a space bounded on 3 sides within the ICT, and the space is deeper than 250 mm, and where a parallel approach is possible,  
the dimension of the [access space](#accessspace) shall be a minimum of 2 000 mm wide. This is shown in Figure 8.12.

Et billede, der indeholder diagram, skitse, tegning, design

Automatisk genereret beskrivelse

Figure 8.12: Manoeuvring Clearance in an a space bounded on 3 sides, Parallel Approach

### 8.3.6 Legibility

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT), and provides one or more display screens,  
at least one of each type of display screen shall be positioned such that the information on the screen is legible from points located between 1 015 mm and 1 760 mm above the centre of the floor of the operating area. See Figure 8.13.

Note: The intent of this requirement is that the information on the screen can be read by users with normal vision and appropriate language skills, when standing and when seated in a wheelchair. The heights approximately reflect the eye heights of a 97.5 percentile male person and a 2.5 percentile female person.

A diagram of a person in a wheelchair

AI-generated content may be incorrect.

Figure 8.13: Information legible when standing and sitting

### 8.3.7 Installation instructions

Where ICT is, or includes, [stationary hardware](#stationaryHardwareICT),  
installation instructions shall be made available. These instructions shall give guidance on how to install the ICT in a manner that takes into account [applicable requirement](#applicablerequirement)s for [accessibility](#accessibility) of the built environment as they apply to the installation of the ICT.

In Europe, the [applicable requirement](#applicablerequirement)s for [accessibility](#accessibility) of the built environment are contained in EN 17210 [i.66].

## 8.4 Mechanically operable parts

### 8.4.1 Numeric keys

Where ICT is, or includes, hardware, and has physical numeric keys arranged in a rectangular keypad layout,  
the number five key shall be tactilely distinct from the other keys of the keypad.

Note: Recommendation ITU‑T E.161 [i.20] describes the 12-key telephone keypad layout and provides further details of the form of tactile markers.

### 8.4.2 Operation of mechanical parts

#### 8.4.2.1 Mechanical operable parts discernability

Where ICT is, or includes, hardware, and has [mechanical operable parts](#mechanicallyOperablePart),  
the ICT shall provide a means to discern each operable part by means of touch.

#### 8.4.2.2 Force of operation of mechanical parts

Where ICT is, or includes, hardware, and has a control that requires a force greater than 22,2 N to operate it,  
an accessible alternative means of operation that requires a force less than 22,2 N shall be provided.

Note: ISO 21542:2011 [i.34]: Building Construction - Accessibility and Usability of the Built Environment recommends a value between 2,5 and 5 Newtons.

### 8.4.3 Keys, tickets and fare cards

Where ICT is, or includes, hardware, and has keys, tickets or fare cards, and their orientation is important for further use,  
the keys, tickets or fare cards shall each have an orientation that is tactilely discernible.

Note: ETSI ETS 300 767 [i.6] defines suitable tactile indications for plastic cards.

## 8.5 Tactile indication of speech mode

Where ICT is, or includes, hardware, and is designed for shared use, and speech output is available,  
a tactile indication of the means to initiate the speech mode of operation shall be provided.

Note: The tactile indication could include Braille instructions.

# 9 Web

## 9.0 General (informative)

Requirements in clause 9 apply to [web pages](#webPage) (as defined in clause 3.1) including:

* Conformance with W3C Web Content Accessibility Guidelines (WCAG 2.0) Level AA is equivalent to conforming with clauses 9.1.1, 9.1.2, 9.1.3.1 to 9.1.3.3, 9.1.4.1 to 9.1.4.5, 9.2.1.1, 9.2.1.2, 9.2.2, 9.2.3, 9.2.4, 9.3, 9.4.1.2 and the conformance requirements of clause 9.6 of the present document.
* Conformance with W3C Web Content Accessibility Guidelines (WCAG 2.1) [i.42] Level AA is equivalent to conforming with all of clauses 9.1 to 9.4 except 9.2.4.11, 9.2.5.7, 9.2.5.8, 9.3.2.6, 9.2.3.6, 9.2.3.8 and with the conformance requirements of clause 9.6 of the present document.
* Conformance with W3C Web Content Accessibility Guidelines (WCAG 2.2) [4] Level AA is equivalent to conforming with all of clauses 9.1 to 9.4 and the conformance requirements of clause 9.6 of the present document.
* Requirements for non-web documents and non-web software are given in clauses 10 and 11 respectively.

Note 1: When evaluating web sites they are evaluated as individual web pages. Web applications, including mobile web applications, are covered under the definition of web page which is quite broad and covers all web content types.

Note 2: WCAG 2.0 is identical to ISO/IEC 40500:2012: "Information technology - W3C Web Content Accessibility Guidelines (WCAG) 2.0" [i.41].

Note 3: When parts of non-web software, such as mobile apps, are implemented with web views, such a view is embedded in the app and thus does not meet the definition of a web page. The clause 11 “Software” requirements are the appropriate requirements to be applied to these web views. There are no circumstances in which clause 9 requirements and the corresponding clause 11 requirements are both applicable. Where there is any doubt, clause 11 requirements have precedence.The requirements in clauses 9.1 to 9.4 are written using the concept of satisfying success criteria (defined in clause 3.1).

Note 4: A web page satisfies a WCAG success criterion when the success criterion does not evaluate to false when applied to the web page. This implies that if the success criterion puts conditions on a specific feature and that specific feature does not occur in the web page, then the web page satisfies the success criterion.

EXAMPLE: For example, a web page that does not contain pre-recorded audio content in synchronized media will automatically satisfy WCAG success criterion 1.2.2 (captions - pre-recorded) and, in consequence, will also meet clause 9.1.2.2.

In addition to Level AA success criteria, the Web Content Accessibility Guidelines also include success criteria for Level AAA. These are listed in clause 9.5 of the present document. Web authors and procurement accessibility specialists are encouraged to consider whether any of the WCAG Level AAA success criteria offer suggestions that may be applicable and relevant to their project, as well as potentially beneficial to some users.

Note 5: The W3C states that "It is not recommended that Level AAA conformance be required as a general policy for entire sites because it is not possible to satisfy all Level AAA Success Criteria for some content".

Note 6: "Void" clauses have been inserted in order to maintain alignment with the numbering of WCAG 2.2 Level A and Level AA Success Criteria.

## 9.1 Perceivable

### 9.1.1 Text alternatives

#### 9.1.1.1 Non-text content

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.1.1 Non-text content](https://www.w3.org/TR/WCAG22/" \l "non-text-content).

### 9.1.2 Time-based media

#### 9.1.2.1 Audio-only and video-only (pre-recorded)

Where ICT is, or includes, a web page,  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-only-and-video-only-prerecorded).

#### 9.1.2.2 Captions (pre-recorded)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "captions-prerecorded).

#### 9.1.2.3 Audio description or media alternative (pre-recorded)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-or-media-alternative-prerecorded).

#### 9.1.2.4 Captions (live)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.2.4 Captions (Live)](https://www.w3.org/TR/WCAG22/" \l "captions-live).

#### 9.1.2.5 Audio description (pre-recorded)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-prerecorded).

### 9.1.3 Adaptable

#### 9.1.3.1 Info and relationships

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.3.1 Info and Relationships](https://www.w3.org/TR/WCAG22/" \l "info-and-relationships).

#### 9.1.3.2 Meaningful sequence

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.3.2 Meaningful Sequence](https://www.w3.org/TR/WCAG22/" \l "meaningful-sequence).

#### 9.1.3.3 Sensory characteristics

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.3.3 Sensory Characteristics](https://www.w3.org/TR/WCAG22/" \l "sensory-characteristics).

#### 9.1.3.4 Orientation

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.3.4 Orientation](https://www.w3.org/TR/WCAG22/" \l "orientation).

#### 9.1.3.5 Identify input purpose

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose](https://www.w3.org/TR/WCAG22/" \l "identify-input-purpose).

### 9.1.4 Distinguishable

#### 9.1.4.1 Use of colour

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.1 Use of Color](https://www.w3.org/TR/WCAG22/" \l "use-of-color).

#### 9.1.4.2 Audio control

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.2 Audio Control](https://www.w3.org/TR/WCAG22/" \l "audio-control).

#### 9.1.4.3 Contrast (minimum)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.3 Contrast (Minimum)](https://www.w3.org/TR/WCAG22/" \l "contrast-minimum).

#### 9.1.4.4 Resize text

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.4 Resize text](https://www.w3.org/TR/WCAG22/" \l "resize-text).

#### 9.1.4.5 Images of text

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.5 Images of Text](https://www.w3.org/TR/WCAG22/" \l "images-of-text).

#### 9.1.4.6 Void

#### 9.1.4.7 Void

#### 9.1.4.8 Void

#### 9.1.4.9 Void

#### 9.1.4.10 Reflow

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.10 Reflow](https://www.w3.org/TR/WCAG22/" \l "reflow).

#### 9.1.4.11 Non-text contrast

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.11 Non-text Contrast](https://www.w3.org/TR/WCAG22/" \l "non-text-contrast).

#### 9.1.4.12 Text spacing

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.12 Text spacing](https://www.w3.org/TR/WCAG22/" \l "text-spacing).

#### 9.1.4.13 Content on hover or focus

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 1.4.13 Content on Hover or Focus](https://www.w3.org/TR/WCAG22/" \l "content-on-hover-or-focus).

## 9.2 Operable

### 9.2.1 Keyboard accessible

#### 9.2.1.1 Keyboard

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.1.1 Keyboard](https://www.w3.org/TR/WCAG22/" \l "keyboard).

#### 9.2.1.2 No keyboard trap

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.1.2 No Keyboard Trap](https://www.w3.org/TR/WCAG22/" \l "no-keyboard-trap).

#### 9.2.1.3 Void

#### 9.2.1.4 Character key shortcuts

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts](https://www.w3.org/TR/WCAG22/" \l "character-key-shortcuts).

### 9.2.2 Enough time

#### 9.2.2.1 Timing adjustable

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.2.1 Timing Adjustable](https://www.w3.org/TR/WCAG22/" \l "timing-adjustable).

#### 9.2.2.2 Pause, stop, hide

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.2.2 Pause, Stop, Hide](https://www.w3.org/TR/WCAG22/" \l "pause-stop-hide).

### 9.2.3 Seizures and physical reactions

#### 9.2.3.1 Three flashes or below threshold

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.3.1 Three Flashes or Below Threshold](https://www.w3.org/TR/WCAG22/" \l "three-flashes-or-below-threshold).

### 9.2.4 Navigable

#### 9.2.4.1 Bypass blocks

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.4.1 Bypass Blocks](https://www.w3.org/TR/WCAG22/" \l "bypass-blocks).

#### 9.2.4.2 Page titled

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.4.2 Page Titled](https://www.w3.org/TR/WCAG22/" \l "page-titled).

#### 9.2.4.3 Focus order

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.4.3 Focus Order](https://www.w3.org/TR/WCAG22/" \l "focus-order).

#### 9.2.4.4 Link purpose (in context)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context)](https://www.w3.org/TR/WCAG22/" \l "link-purpose-in-context).

#### 9.2.4.5 Multiple ways

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.4.5 Multiple Ways](https://www.w3.org/TR/WCAG22/" \l "multiple-ways).

#### 9.2.4.6 Headings and labels

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.4.6 Headings and Labels](https://www.w3.org/TR/WCAG22/" \l "headings-and-labels).

#### 9.2.4.7 Focus visible

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.4.7 Focus Visible](https://www.w3.org/TR/WCAG22/" \l "focus-visible).

#### 9.2.4.8 Void

#### 9.2.4.9 Void

#### 9.2.4.10 Void

#### 9.2.4.11 Focus not obscured (minimum)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.4.11 Focus Not Obscured (Minimum)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-minimum).

### 9.2.5 Input modalities

#### 9.2.5.1 Pointer gestures

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG22/" \l "pointer-gestures).

#### 9.2.5.2 Pointer cancellation

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.5.2 Pointer Cancellation](https://www.w3.org/TR/WCAG22/" \l "pointer-cancellation).

#### 9.2.5.3 Label in name

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.5.3 Label in Name](https://www.w3.org/TR/WCAG22/" \l "label-in-name).

#### 9.2.5.4 Motion actuation

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.5.4 Motion Actuation](https://www.w3.org/TR/WCAG22/" \l "motion-actuation).

#### 9.2.5.5 Void

#### 9.2.5.6 Void

#### 9.2.5.7 Dragging movements

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.5.7 Dragging Movements](https://www.w3.org/TR/WCAG22/" \l "dragging-movements).

#### 9.2.5.8 Target size (minimum)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 2.5.8 Target Size (Minimum)](https://www.w3.org/TR/WCAG22/" \l "target-size-minimum).

## 9.3 Understandable

### 9.3.1 Readable

#### 9.3.1.1 Language of page

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.1.1 Language of Page](https://www.w3.org/TR/WCAG22/" \l "language-of-page).

#### 9.3.1.2 Language of parts

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.1.2 Language of Parts](https://www.w3.org/TR/WCAG22/" \l "language-of-parts).

### 9.3.2 Predictable

#### 9.3.2.1 On focus

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.2.1 On Focus](https://www.w3.org/TR/WCAG22/" \l "on-focus).

#### 9.3.2.2 On input

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.2.2 On Input](https://www.w3.org/TR/WCAG22/" \l "on-input).

#### 9.3.2.3 Consistent navigation

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.2.3 Consistent Navigation](https://www.w3.org/TR/WCAG22/" \l "consistent-navigation).

#### 9.3.2.4 Consistent identification

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.2.4 Consistent Identification](https://www.w3.org/TR/WCAG22/" \l "consistent-identification).

#### 9.3.2.5 Void

#### 9.3.2.6 Consistent help

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.2.6 Consistent Help](https://www.w3.org/TR/WCAG22/" \l "consistent-help).

### 9.3.3 Input assistance

#### 9.3.3.1 Error identification

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.3.1 Error Identification](https://www.w3.org/TR/WCAG22/" \l "error-identification).

#### 9.3.3.2 Labels or instructions

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions](https://www.w3.org/TR/WCAG22/" \l "labels-or-instructions).

#### 9.3.3.3 Error suggestion

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.3.3 Error Suggestion](https://www.w3.org/TR/WCAG22/" \l "error-suggestion).

#### 9.3.3.4 Error prevention (legal, financial, data)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data)](https://www.w3.org/TR/WCAG22/" \l "error-prevention-legal-financial-data).

#### 9.3.3.5 Void

#### 9.3.3.6 Void

#### 9.3.3.7 Redundant entry

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.3.7 Redundant Entry](https://www.w3.org/TR/WCAG22/" \l "redundant-entry).

#### 9.3.3.8 Accessible authentication (minimum)

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-minimum).

## 9.4 Robust

### 9.4.1 Compatible

#### 9.4.1.1 Void

Note: Earlier versions of the present document referenced the [4.1.1 Parsing](https://www.w3.org/TR/WCAG20/" \l "ensure-compat-parses) success criterion from WCAG 2.0 [i.41] and WCAG 2.1 [i.42]. In WCAG 2.2 [4], this criterion has been removed, because the accessibility problems it was intended to prevent “either no longer exist or are addressed by other criteria”.

#### 9.4.1.2 Name, role, value

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 4.1.2 Name, Role, Value](https://www.w3.org/TR/WCAG22/" \l "name-role-value).

#### 9.4.1.3 Status messages

Where ICT is, or includes, a [web page](#webPage),  
the web page shall satisfy [WCAG 2.2 Success Criterion 4.1.3 Status Messages](https://www.w3.org/TR/WCAG22/" \l "status-messages).

## 9.5 WCAG 2.2 AAA Success Criteria (informative)

In addition to the Level AA success criteria, included in clauses 9.1 to 9.4, the Web Content Accessibility Guidelines include success criteria for Level AAA. These are listed in Table 9.1. Web authors and procurement accessibility specialists are encouraged to consider the WCAG 2.2 Level AAA success criteria that, when it is possible to apply them, may provide access beyond that required in the present document.

Note: The W3C states that "It is not recommended that Level AAA conformance be required as a general policy for entire sites because it is not possible to satisfy all Level AAA Success Criteria for some content".

Table 9.1: WCAG 2.2 Level AAA Success Criteria

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Guideline | Success Criterion Number | Success Criteria Name |
| 1 | Time-based media | [1.2.6](https://www.w3.org/TR/WCAG22/" \l "sign-language-prerecorded) | [Sign Language (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "sign-language-prerecorded) |
| 2 | Time-based media | [1.2.7](https://www.w3.org/TR/WCAG22/" \l "extended-audio-description-prerecorded) | [Extended Audio Description (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "extended-audio-description-prerecorded) |
| 3 | Time-based media | [1.2.8](https://www.w3.org/TR/WCAG22/" \l "media-alternative-prerecorded) | [Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "media-alternative-prerecorded) |
| 4 | Time-based media | [1.2.9](https://www.w3.org/TR/WCAG22/" \l "audio-only-live) | [Audio-only (Live)](https://www.w3.org/TR/WCAG22/" \l "audio-only-live) |
| 5 | Adaptable | [1.3.6](https://www.w3.org/TR/WCAG22/" \l "identify-purpose) | [Identify Purpose](https://www.w3.org/TR/WCAG22/" \l "identify-purpose) |
| 6 | Distinguishable | [1.4.6](https://www.w3.org/TR/WCAG22/" \l "contrast-enhanced) | [Contrast (Enhanced)](https://www.w3.org/TR/WCAG22/" \l "contrast-enhanced) |
| 7 | Distinguishable | [1.4.7](https://www.w3.org/TR/WCAG22/" \l "low-or-no-background-audio) | [Low or No Background Audio](https://www.w3.org/TR/WCAG22/" \l "low-or-no-background-audio) |
| 8 | Distinguishable | [1.4.8](https://www.w3.org/TR/WCAG22/" \l "visual-presentation) | [Visual Presentation](https://www.w3.org/TR/WCAG22/" \l "visual-presentation) |
| 9 | Distinguishable | [1.4.9](https://www.w3.org/TR/WCAG22/" \l "images-of-text-no-exception) | [Images of Text (No Exception)](https://www.w3.org/TR/WCAG22/" \l "images-of-text-no-exception) |
| 10 | Keyboard Accessible | [2.1.3](https://www.w3.org/TR/WCAG22/" \l "keyboard-no-exception) | [Keyboard (No Exception)](https://www.w3.org/TR/WCAG22/" \l "keyboard-no-exception) |
| 11 | Enough time | [2.2.3](https://www.w3.org/TR/WCAG22/" \l "no-timing) | [No Timing](https://www.w3.org/TR/WCAG22/" \l "no-timing) |
| 12 | Enough time | [2.2.4](https://www.w3.org/TR/WCAG22/" \l "interruptions) | [Interruptions](https://www.w3.org/TR/WCAG22/" \l "interruptions) |
| 13 | Enough time | [2.2.5](https://www.w3.org/TR/WCAG22/" \l "re-authenticating) | [Re-authenticating](https://www.w3.org/TR/WCAG22/" \l "re-authenticating) |
| 14 | Enough time | [2.2.6](https://www.w3.org/TR/WCAG22/" \l "timeouts) | [Timeouts](https://www.w3.org/TR/WCAG22/" \l "timeouts) |
| 15 | Seizures and physical reactions | [2.3.2](https://www.w3.org/TR/WCAG22/" \l "three-flashes) | [Three Flashes](https://www.w3.org/TR/WCAG22/" \l "three-flashes) |
| 16 | Seizures and physical reactions | [2.3.3](https://www.w3.org/TR/WCAG22/" \l "animation-from-interactions) | [Animation from Interactions](https://www.w3.org/TR/WCAG22/" \l "animation-from-interactions) |
| 17 | Navigable | [2.4.8](https://www.w3.org/TR/WCAG22/" \l "location) | [Location](https://www.w3.org/TR/WCAG22/" \l "location) |
| 18 | Navigable | [2.4.9](https://www.w3.org/TR/WCAG22/" \l "link-purpose-link-only) | [Link Purpose (Link Only)](https://www.w3.org/TR/WCAG22/" \l "link-purpose-link-only) |
| 19 | Navigable | [2.4.10](https://www.w3.org/TR/WCAG22/" \l "section-headings) | [Section Headings](https://www.w3.org/TR/WCAG22/" \l "section-headings) |
| 20 | Navigable | [2.4.12](https://www.w3.org/TR/WCAG22/#focus-not-obscured-enhanced) | [Focus Not Obscured (Enhanced)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-enhanced) |
| 21 | Navigable | [2.4.13](https://www.w3.org/TR/WCAG22/#focus-appearance) | [Focus Appearance](https://www.w3.org/TR/WCAG22/" \l "focus-appearance) |
| 22 | Input modalities | [2.5.5](https://www.w3.org/TR/WCAG22/" \l "target-size) | [Target Size](https://www.w3.org/TR/WCAG22/" \l "target-size) (Enhanced) |
| 23 | Input modalities | [2.5.6](https://www.w3.org/TR/WCAG22/" \l "concurrent-input-mechanisms) | [Concurrent Input Mechanisms](https://www.w3.org/TR/WCAG22/" \l "concurrent-input-mechanisms) |
| 24 | Readable | [3.1.3](https://www.w3.org/TR/WCAG22/" \l "unusual-words) | [Unusual Words](https://www.w3.org/TR/WCAG22/" \l "unusual-words) |
| 25 | Readable | [3.1.4](https://www.w3.org/TR/WCAG22/" \l "abbreviations) | [Abbreviations](https://www.w3.org/TR/WCAG22/" \l "abbreviations) |
| 26 | Readable | [3.1.5](https://www.w3.org/TR/WCAG22/" \l "reading-level) | [Reading Level](https://www.w3.org/TR/WCAG22/" \l "reading-level) |
| 27 | Readable | [3.1.6](https://www.w3.org/TR/WCAG22/" \l "pronunciation) | [Pronunciation](https://www.w3.org/TR/WCAG22/" \l "pronunciation) |
| 28 | Predictable | [3.2.5](https://www.w3.org/TR/WCAG22/" \l "change-on-request) | [Change on Request](https://www.w3.org/TR/WCAG22/" \l "change-on-request) |
| 29 | Input assistance | [3.3.5](https://www.w3.org/TR/WCAG22/" \l "help) | [Help](https://www.w3.org/TR/WCAG22/" \l "help) |
| 30 | Input assistance | [3.3.6](https://www.w3.org/TR/WCAG22/" \l "error-prevention-all) | [Error Prevention (All)](https://www.w3.org/TR/WCAG22/" \l "error-prevention-all) |
| 31 | Input assistance | [3.3.9](https://www.w3.org/TR/WCAG22/#accessible-authentication-enhanced) | [Accessible Authentication (Enhanced)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-enhanced) |

## 9.6 WCAG conformance requirements

Where ICT is, or includes, a web page,  
the web page shall satisfy all the following five WCAG 2.2 conformance requirements at Level AA [4]:

1. Conformance level
2. Full pages
3. Complete processes
4. Only Accessibility-Supported Ways of Using Technologies
5. Non-interference

Note 1: Clause 9.6 is a direct copy of the WCAG Conformance Requirements, to ensure that web pages conforming to EN 301 549 also conform to WCAG. It is important to note that the WCAG 2.2 [4] success criteria (requirements in clauses 9.1 to 9.4 of the present document) and the conformance requirements were designed to work together, such that the language of the success criteria is based on the nature of the conformance requirements. Thus, the conformance conditions stated in clause 9.6 are to be applied when checking conformance of all requirements in clauses 9.1 to 9.4.

Note 2: A Web page that meets all of requirements 9.1 to 9.4, or where a Level AA conforming alternate version (as defined in WCAG 2.2 [4]) is provided, will meet conformance requirement 1.

Note 3: Conformance requirement 2 states that conformance (as defined in WCAG 2.2 [4]) (and conformance level) is for full web page(s) only, and cannot be achieved if part of a web page is excluded.

Note 4: Conformance requirement 3 states that when a web page is one of a series of web pages presenting a process (as defined in WCAG 2.2 [4]) (i.e., a sequence of steps that need to be completed in order to accomplish an activity), all web pages in the process conform at the specified level or better.

Note 5: Conformance requirement 4 states that only accessibility-supported (as defined in WCAG 2.2 [4]) ways of using technologies (as defined in WCAG 2.2 [4]) are relied upon (as defined in WCAG 2.2 [4]) to satisfy the success criteria, and any information or functionality that is provided in a way that is not accessibility supported is also available in a way that is accessibility supported.

Note 6: Conformance requirement 5 states that if technologies (as defined in WCAG 2.2 [4]) are used in a way that is not accessibility supported (as defined in WCAG 2.2 [4]), or if they are used in a non-conforming way, then they do not block the ability of users to access the rest of the page. In addition, the web page as a whole has to continue to meet the conformance requirements when any technology that is not relied upon (as defined in WCAG 2.2 [4]) is turned on, off, or is not supported in a user agent, and all content on the page, including content that is not otherwise relied upon to meet conformance, meets clauses 9.1.4.2, 9.2.1.2, 9.2.2.2 and 9.2.3.1.

Note 7: According to W3C: "WCAG 2.2 extends Web Content Accessibility Guidelines 2.1 [i.44], which was published as a W3C Recommendation June 2018. Content that conforms to WCAG 2.2 also conforms to WCAG 2.0 and WCAG 2.1" [i.44].

# 10 Non-web documents

## 10.0 General (informative)

Requirements in clause 10 apply to:

* [documents](#document) that are not [web pages](#webPage);
* documents that are not [embedded](#embedded) in web pages; and
* documents that are provided with web pages but are neither embedded nor rendered together with the web page from which they are provided (i.e. the present clause applies to downloadable documents).

Clause 9 provides requirements for documents that are in web pages or that are embedded in web pages and that are used in the rendering or that are intended to be rendered together with the web page in which they are embedded.

Note 1: Some examples of documents are letters, spreadsheets, emails, books, pictures, presentations, and movies that have an associated user agent such as a document reader, editor or media player.

Note 2: A single document may be composed of multiple files such as the video content and closed caption text. This fact is not usually apparent to the end-user consuming the document/content.

Note 3: Documents require a user agent in order for the content to be presented to users. The requirements for user agents can be found in clause 11.

Note 4: The requirements for content that is part of software, can be found in clause 11.

Note 5: The success criteria set out in clause 10 are intended to harmonize with the Working Group Note [i.26] produced by the W3C's [WCAG2ICT Task Force](http://www.w3.org/WAI/GL/WCAG2ICT-TF/).

Note 6: Where the meaning of WCAG glossary terms when applied to [non-web document](#NonWebDocument)s is unclear, reference to the [Glossary Items with Specific Guidance](https://www.w3.org/TR/wcag2ict-22/" \l "glossary-items-with-specific-guidance), in the Working Group Note [i.26], can help to clarify how they are to be understood.

Note 7: "Void" clauses have been inserted in order to maintain alignment of the numbering in clauses 9, 10 and 11.

Note 8: Requirements in clause 10 also apply to documents that are protected using mechanisms such as digital signatures, encryption, password protection, and watermarks when they are presented to the user.

Note 9: It is best practice to provide meta data on the accessibility of the document within or separate to the document using the "Schema.org Accessibility Properties for Discoverability Vocabulary" [i.40].

## 10.1 Perceivable

### 10.1.1 Text alternatives

#### 10.1.1.1 Non-text content

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 1.1.1 Non-text content](https://www.w3.org/TR/WCAG22/" \l "non-text-content).

Note: CAPTCHAs do not currently appear outside of the Web. However, if they do appear, this guidance is accurate.

### 10.1.2 Time-based media

#### 10.1.2.1 Audio-only and video-only (pre-recorded)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-only-and-video-only-prerecorded).

Note: The alternative can be provided directly in the document - or provided in an alternate version that meets the success criterion.

#### 10.1.2.2 Captions (pre-recorded)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "captions-prerecorded).

Note: The WCAG 2.2 definition of "captions" notes that "in some countries, captions are called subtitles". They are also sometimes referred to as "subtitles for the hearing impaired". Per the definition in WCAG 2.2, to meet this success criterion, whether called captions or subtitles, they would have to provide "synchronized visual and / or text alternative for both speech and non-speech audio information needed to understand the media content" where non-speech information includes "sound effects, music, laughter, speaker identification and location".

#### 10.1.2.3 Audio description or media alternative (pre-recorded)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-or-media-alternative-prerecorded).

Note 1: The WCAG 2.2 definition of "audio description" says that "audio description" is "Also called 'video description' and 'descriptive narration'".

Note 2: Secondary or alternate audio tracks are commonly used for this purpose.

#### 10.1.2.4 Captions (live)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.2.4 Captions (Live)](https://www.w3.org/TR/WCAG22/" \l "captions-live).

Note: The WCAG 2.2 definition of "captions" notes that "in some countries, captions are called subtitles". They are also sometimes referred to as "subtitles for the hearing impaired". Per the definition in WCAG 2.2, to meet this success criterion, whether called captions or subtitles, they would have to provide "synchronized visual and / or text alternative for both speech and non-speech audio information needed to understand the media content" where non-speech information includes "sound effects, music, laughter, speaker identification and location".

#### 10.1.2.5 Audio description (pre-recorded)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-prerecorded).

Note 1: The WCAG 2.2 definition of "audio description" says that audio description is "Also called 'video description' and 'descriptive narration'".

Note 2: Secondary or alternate audio tracks are commonly used for this purpose.

### 10.1.3 Adaptable

#### 10.1.3.1 Info and relationships

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document it shall satisfy the [WCAG 2.2 Success Criterion 1.3.1 Info and Relationships](https://www.w3.org/TR/WCAG22/" \l "info-and-relationships).

Note: Where documents contain non-standard structure types (roles), it is best practice to map them to a standard structure type as a fall-back solution for the reader.

#### 10.1.3.2 Meaningful sequence

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.3.2 Meaningful Sequence](https://www.w3.org/TR/WCAG22/" \l "meaningful-sequence).

#### 10.1.3.3 Sensory characteristics

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.3.3 Sensory Characteristics](https://www.w3.org/TR/WCAG22/" \l "sensory-characteristics).

#### 10.1.3.4 Orientation

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.3.4 Orientation](https://www.w3.org/TR/WCAG22/" \l "orientation).

#### 10.1.3.5 Identify input purpose

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose](https://www.w3.org/TR/WCAG22/" \l "identify-input-purpose).

Note 1: [Non-web document](#NonWebDocument) technologies that do not provide attributes that support identifying the expected meaning for the form input data are not in scope for this success criterion.

Note 2: For [non-web documents](#NonWebDocument) that present input fields, the terms for the input purposes would be the equivalent terms to those listed in the WCAG 2.2 section [Input Purposes](https://www.w3.org/TR/WCAG22/" \l "input-purposes) for User Interface Components are supported by the technology used.

### 10.1.4 Distinguishable

#### 10.1.4.1 Use of colour

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.4.1 Use of Color](https://www.w3.org/TR/WCAG22/" \l "use-of-color).

#### 10.1.4.2 Audio control

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.1.

Table 10.1: Document success criterion: Audio control

|  |
| --- |
| If any audio in a document plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. |
| Note 1: Since any part of a document that does not meet this success criterion can interfere with a user's ability to use the whole document, all content in the document (whether or not it is used to meet other success criteria) shall meet this success criterion. |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 1.4.2 Audio Control](https://www.w3.org/TR/WCAG22/" \l "audio-control), replacing "on a Web page" with "in a document", "any content" with "any part of a document", "whole page" with "whole document", "on the Web page" with "in the document", removing "See Conformance Requirement 5: Non‑Interference" and adding note 1. |

#### 10.1.4.3 Contrast (minimum)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.4.3 Contrast (Minimum)](https://www.w3.org/TR/WCAG22/" \l "contrast-minimum).

#### 10.1.4.4 Resize text

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.4.4 Resize text](https://www.w3.org/TR/WCAG22/" \l "resize-text).

Note 1: Content for which there are software players, viewers or editors with a 200 percent zoom feature would automatically meet this success criterion when used with such players, unless the content will not work with zoom.

Note 2: This success criterion is about the ability to allow users to enlarge the text on screen at least up to 200 % without needing to use assistive technologies. This means that the application provides some means for enlarging the text 200 % (zoom or otherwise) without loss of content or functionality or that the application works with the platform features that meet this requirement.

Note 3: It is best practice to use only fonts that allow for scaling without loss of quality (e.g. pixelized presentation). This applies in particular to embedded fonts.

#### 10.1.4.5 Images of text

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 1.4.5 Images of Text](https://www.w3.org/TR/WCAG22/" \l "images-of-text).

#### 10.1.4.6 Void

#### 10.1.4.7 Void

#### 10.1.4.8 Void

#### 10.1.4.9 Void

#### 10.1.4.10 Reflow

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.2.

Table 10.2: Document success criterion: Reflow

|  |
| --- |
| Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:   * Vertical scrolling content at a width equivalent to 320 CSS pixels. * Horizontal scrolling content at a height equivalent to 256 CSS pixels.   Except for parts of the content which require two-dimensional layout for usage or meaning. |
| Note 1: 320 CSS pixels is equivalent to a starting viewport width of 1 280 CSS pixels wide at 400 % zoom. For documents which are designed to scroll horizontally (e.g. with vertical text), the 256 CSS pixels is equivalent to a starting viewport height of 1 024 pixels at 400 % zoom. |
| Note 2: Examples of content which require two-dimensional layout are images required for understanding (such as maps and diagrams), video, games, presentations, data tables (not individual cells), and interfaces where it is necessary to keep toolbars in view while manipulating content. It is acceptable to provide two-dimensional scrolling for such parts of the content.  NOTE 3: In technologies where CSS is not used, the definition of 'CSS pixel' applies as described in [Applying “CSS pixel” to Non-Web Documents and Software](https://w3c.github.io/wcag2ict/" \l "applying-css-pixel-to-non-web-documents-and-software).  NOTE 4: If a [non-web document](#NonWebDocument) type and its available [user agents](https://w3c.github.io/wcag2ict/" \l "user-agent) do not support reflow, it may not be possible for a document of that type to meet this success criterion. |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 1.4.10 Reflow](https://www.w3.org/TR/WCAG22/" \l "reflow) replacing the original WCAG 2.2 notes with notes 1 to 4, above. |

#### 10.1.4.11 Non-text contrast

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 1.4.11 Non-text Contrast](https://www.w3.org/TR/WCAG22/" \l "non-text-contrast).

#### 10.1.4.12 Text spacing

Where ICT is, or includes, a [non-web document](#NonWebDocument) that does not have a fixed size [content](#content) layout area that is essential to the information being conveyed,  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 1.4.12 Text spacing](https://www.w3.org/TR/WCAG22/" \l "text-spacing).

#### 10.1.4.13 Content on hover or focus

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 1.4.13 Content on Hover or Focus](https://www.w3.org/TR/WCAG22/" \l "content-on-hover-or-focus).

## 10.2 Operable

### 10.2.1 Keyboard accessible

#### 10.2.1.1 Keyboard

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 2.1.1 Keyboard](https://www.w3.org/TR/WCAG22/" \l "keyboard).

#### 10.2.1.2 No keyboard trap

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.3.

Table 10.3: Document success criterion: No keyboard trap

|  |
| --- |
| If keyboard focus can be moved to a component of the document using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away. |
| Note 1: Since any part of a document that does not meet this success criterion can interfere with a user's ability to use the whole document, it is necessary for all content in the document (whether or not it is used to meet other success criteria) to meet this success criterion. |
| Note 2: Standard exit methods may vary by platform. For example, on many desktop platforms, the Escape key is a standard method for exiting. |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.1.2 No Keyboard Trap](https://www.w3.org/TR/WCAG22/" \l "no-keyboard-trap) replacing "page" and "Web page" with "document", removing "See Conformance Requirement 5: Non-Interference" and with the addition of note 2 above and with note 1 above re-drafted to avoid the use of the word "must". |

#### 10.2.1.3 Void

#### 10.2.1.4 Character key shortcuts

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts](https://www.w3.org/TR/WCAG22/" \l "character-key-shortcuts).

### 10.2.2 Enough time

#### 10.2.2.1 Timing adjustable

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.4.

Table 10.4: Document success criterion: Timing adjustable

|  |
| --- |
| For each time limit that is set by the document, at least one of the following is true:   * **Turn off:** The user is allowed to turn off the time limit before encountering it; or * **Adjust:** The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or * **Extend:** The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or * **Real-time Exception:** The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or * **Essential Exception:** The time limit is essential and extending it would invalidate the activity; or * **20 Hour Exception:** The time limit is longer than 20 hours. |
| Note 1: This success criterion helps ensure that users can complete tasks without unexpected changes in content or context that are a result of a time limit. This success criterion should be considered in conjunction with [WCAG 2.2 Success Criterion 3.2.1 On Focus](https://www.w3.org/TR/WCAG22/" \l "on-focus), which puts limits on changes of content or context as a result of user action. |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.2.1 Timing Adjustable](https://www.w3.org/TR/WCAG22/" \l "timing-adjustable) replacing "the content" with "documents" and with the words "WCAG 2.2" added before the word "Success Criterion" in note 1 above. |

#### 10.2.2.2 Pause, stop, hide

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.5.

Table 10.5: Document success criterion: Pause, stop, hide

|  |
| --- |
| For moving, blinking, scrolling, or auto-updating information, all of the following are true:   * **Moving, blinking, scrolling:** For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and * **Auto-updating:** For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential. |
| Note 1: For requirements related to flickering or flashing content, refer to [WCAG 2.2 Guideline 2.3](https://www.w3.org/TR/WCAG22/" \l "seizures-and-physical-reactions). |
| Note 2: Since any part of a document that does not meet this success criterion can interfere with a user's ability to use the whole document, it is necessary for all content in the document (whether it is used to meet other success criteria or not) to meet this success criterion. |
| Note 3: Content that is updated periodically by software or that is streamed to the user agent is not required to preserve or present information that is generated or received between the initiation of the pause and resuming presentation, as this may not be technically possible, and in many situations could be misleading to do so. |
| Note 4: An animation that occurs as part of a preload phase or similar situation can be considered essential if interaction cannot occur during that phase for all users and if not indicating progress could confuse users or cause them to think that content was frozen or broken.  Note 5: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.2.2 Pause, Stop, Hide](https://www.w3.org/TR/WCAG22/" \l "pause-stop-hide) replacing "page" and "Web page" with "document", removing "See Conformance Requirement 5: Non-Interference" in note 2 of the success criterion, with the words "WCAG 2.2" added before the word "Guideline" in note 1 above and with note 2 above re-drafted to avoid the use of the word "must". |

### 10.2.3 Seizures and physical reactions

#### 10.2.3.1 Three flashes or below threshold

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.6.

Table 10.6: Document success criterion: Three flashes or below threshold

|  |
| --- |
| Documents do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds. |
| Note 1: Since any part of a document that does not meet this success criterion can interfere with a user's ability to use the whole document, it is necessary for all content in the document (whether it is used to meet other success criteria or not) to meet this success criterion. |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.3.1 Three Flashes or Below Threshold](https://www.w3.org/TR/WCAG22/" \l "three-flashes-or-below-threshold) replacing "Web pages" with "documents", "the whole page" with "the whole document", "the Web page" with "the document" and removing "See Conformance Requirement 5: Non-Interference" and with note 1 above re-drafted to avoid the use of the word "must". |

### 10.2.4 Navigable

#### 10.2.4.1 Void

Note 1: WCAG 2.2 Success Criterion 2.4.1 "Bypass blocks" does not apply to single documents, but to a specific definition of "sets of documents" that are rare.

Note 2: Although not a requirement, the ability to bypass blocks of content that are repeated within documents is generally considered best practice and addresses user needs.

#### 10.2.4.2 Document titled

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.7.

Table 10.7: Document success criterion: Document titled

|  |
| --- |
| Documents have titles that describe topic or purpose. |
| Note 1: The name of a document (e.g. document, media file) is a sufficient title if it describes the topic or purpose. |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.4.2 Page Titled](https://www.w3.org/TR/WCAG22/" \l "page-titled) replacing "Web pages" with "documents" and with the addition of note 1 above. |

#### 10.2.4.3 Focus order

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.8.

Table 10.8: Document success criterion: Focus order

|  |
| --- |
| If a document can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability. |
| Note: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.4.3 Focus Order](https://www.w3.org/TR/WCAG22/" \l "focus-order) replacing "Web page" with "document". |

#### 10.2.4.4 Link purpose (in context)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context)](https://www.w3.org/TR/WCAG22/" \l "link-purpose-in-context).

#### 10.2.4.5 Void

Note: WCAG 2.2 Success Criterion 2.4.5 "Multiple ways" does not apply to single documents, but to a specific definition of "sets of documents" that are rare.

#### 10.2.4.6 Headings and labels

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 2.4.6 Headings and Labels](https://www.w3.org/TR/WCAG22/" \l "headings-and-labels).

#### 10.2.4.7 Focus visible

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 2.4.7 Focus Visible](https://www.w3.org/TR/WCAG22/" \l "focus-visible).

#### 10.2.4.8 Void

#### 10.2.4.9 Void

#### 10.2.4.10 Void

#### 10.2.4.11 Focus not obscured (minimum)

Where ICT is, or includes, a non-web document,  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 2.4.11 Focus Not Obscured (Minimum)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-minimum).

### 10.2.5 Input modalities

#### 10.2.5.1 Pointer gestures

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.9.

Table 10.9: Document success criterion: Pointer gestures

|  |
| --- |
| All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential. |
| Note 1: This requirement applies to documents that interpret pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology). |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG22/" \l "pointer-gestures) replacing the original WCAG 2.2 note with note 1 above. |

#### 10.2.5.2 Pointer cancellation

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.10.

Table 10.10: Document success criterion: Pointer cancellation

|  |
| --- |
| For functionality that can be operated using a single pointer, at least one of the following is true:   * No Down-Event: The down-event of the pointer is not used to execute any part of the function; * Abort or Undo: Completion of the function is on the up-event, and a mechanism is available to abort the function before completion or to undo the function after completion; * Up Reversal: The up-event reverses any outcome of the preceding down-event; * Essential: Completing the function on the down-event is essential. |
| Note 1: Functions that emulate a keyboard or numeric keypad key press are considered essential. |
| Note 2: This requirement applies to a document that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology). |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.5.2 Pointer Cancellation](https://www.w3.org/TR/WCAG22/" \l "pointer-cancellation) replacing the original WCAG 2.2 note with notes 1 and 2 above. |

#### 10.2.5.3 Label in name

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 2.5.3 Label in Name](https://www.w3.org/TR/WCAG22/" \l "label-in-name).

#### 10.2.5.4 Motion actuation

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 2.5.4 Motion Actuation](https://www.w3.org/TR/WCAG22/" \l "motion-actuation).

#### 10.2.5.5 Void

#### 10.2.5.6 Void

#### 10.2.5.7 Dragging movements

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 2.5.7 Dragging Movements](https://www.w3.org/TR/WCAG22/" \l "dragging-movements).

#### 10.2.5.8 Target size (minimum)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 2.5.8 Target Size (Minimum)](https://www.w3.org/TR/WCAG22/" \l "target-size-minimum).

## 10.3 Understandable

### 10.3.1 Readable

#### 10.3.1.1 Language of document

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.11.

Table 10.11: Document success criterion: Language of document

|  |
| --- |
| The default human language of each document can be programmatically determined. |
| Note: This success criterion is identical to the [WCAG 2.2 Success Criterion 3.1.1 Language of Page](https://www.w3.org/TR/WCAG22/" \l "language-of-page). replacing "web page" with "document". |

#### 10.3.1.2 Language of parts

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.12.

Table 10.12: Document success criterion: Language of parts

|  |
| --- |
| The human language of each passage or phrase in the document can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text. |
| Note 1: There are some document technologies where there is no assistive technology supported method for marking the language for the different passages or phrases in the document, and it would not be possible to meet this success criterion with those technologies. |
| Note 2: Inheritance is one common method. For example a document provides the language that it is using and it can be assumed that all of the text or user interface elements within that document will be using the same language unless it is indicated. |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 3.1.2 Language of Parts](https://www.w3.org/TR/WCAG22/" \l "language-of-parts) replacing "content" with "document" and with the addition of notes 1 and 2 above. |

### 10.3.2 Predictable

#### 10.3.2.1 On focus

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 3.2.1 On Focus](https://www.w3.org/TR/WCAG22/" \l "on-focus).

Note: Some compound documents and their user agents are designed to provide significantly different viewing and editing functionality depending upon what portion of the compound document is being interacted with (e.g. a presentation that contains an embedded spreadsheet, where the [menu](#menu)s and toolbars of the user agent change depending upon whether the user is interacting with the presentation content, or the embedded spreadsheet content). If the user uses a mechanism other than putting focus on that portion of the compound document with which they mean to interact (e.g. by a [menu](#menu) choice or special keyboard gesture), any resulting change of context would not be subject to this success criterion because it was not caused by a change of focus.

#### 10.3.2.2 On input

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 3.2.2 On Input](https://www.w3.org/TR/WCAG22/" \l "on-input).

#### 10.3.2.3 Void

Note: WCAG 2.2 Success Criterion 3.2.3 "Consistent navigation" does not apply to single [documents](#document), but to a specific definition of "sets of documents" that are rare.

#### 10.3.2.4 Void

Note: WCAG 2.2 Success Criterion 3.2.4 "Consistent identification" does not apply to single [documents](#document), but to a specific definition of "sets of documents" that are rare.

#### 10.3.2.5 Void

#### 10.3.2.6 Consistent help

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 3.2.6 Consistent Help](https://www.w3.org/TR/WCAG22/" \l "consistent-help).

### 10.3.3 Input assistance

#### 10.3.3.1 Error identification

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 3.3.1 Error Identification](https://www.w3.org/TR/WCAG22/" \l "error-identification).

#### 10.3.3.2 Labels or instructions

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions](https://www.w3.org/TR/WCAG22/" \l "labels-or-instructions).

#### 10.3.3.3 Error suggestion

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the [WCAG 2.2 Success Criterion 3.3.3 Error Suggestion](https://www.w3.org/TR/WCAG22/" \l "error-suggestion).

#### 10.3.3.4 Error prevention (legal, financial, data)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.13.

Table 10.13: Document success criterion: Error prevention (legal, financial, data)

|  |
| --- |
| For documents that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true:  1) Reversible: Submissions are reversible.  2) Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.  3) Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. |
| Note: This success criterion is identical to the [WCAG 2.2 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data)](https://www.w3.org/TR/WCAG22/" \l "error-prevention-legal-financial-data) replacing "web pages" with "documents". |

#### 10.3.3.5 Void

#### 10.3.3.6 Void

#### 10.3.3.7 Redundant entry

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the [non-web document](#NonWebDocument) shall satisfy [WCAG 2.2 Success Criterion 3.3.7 Redundant Entry](https://www.w3.org/TR/WCAG22/" \l "redundant-entry).

#### 10.3.3.8 Accessible authentication (minimum)

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the [non-web document](#NonWebDocument) shall satisfy [WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-minimum).

## 10.4 Robust

### 10.4.1 Compatible

#### 10.4.1.1 Void

Note: Earlier versions of the present document referenced the [4.1.1 Parsing](https://www.w3.org/TR/WCAG20/" \l "ensure-compat-parses) success criterion from WCAG 2.0 [i.41] and WCAG 2.1 [i.42]. In WCAG 2.2 [4], this criterion has been removed, because the accessibility problems it was intended to prevent “either no longer exist or are addressed by other criteria”.



#### 10.4.1.2 Name, role, value

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy the success criterion in Table 10.14.

Table 10.14: Document success criterion: Name, role, value

|  |
| --- |
| For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies. |
| Note 1: This success criterion is primarily for software developers who develop or use custom user interface components. Standard user interface components on most accessibility-supported platforms already meet this success criterion when used according to specification. |
| Note 2: For document formats that support interoperability with assistive technology, standard user interface components often meet this success criterion when used according to the general design and accessibility guidance for the document format. |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 4.1.2 Name, Role, Value](https://www.w3.org/TR/WCAG22/" \l "name-role-value) replacing the original WCAG 2.2 note with: "This success criterion is primarily for software developers who develop or use custom user interface components. For example, standard user interface components on most accessibility-supported platforms already meet this success criterion when used according to specification." and with the addition of note 2 above. |

#### 10.4.1.3 Status messages

Where ICT is, or includes, a [non-web document](#NonWebDocument),  
the non-web document shall satisfy [WCAG 2.2 Success Criterion 4.1.3 Status Messages](https://www.w3.org/TR/WCAG22/" \l "status-messages).

## 10.5 Caption positioning (recommendation)

Where ICT is, or includes, a [non-web document](#NonWebDocument), and contains synchronized [media](#media) with [captions](#caption),  
the captions should not obscure relevant information in the synchronized media.

## 10.6 Audio description timing (recommendation)

Where ICT is, or includes, a [non-web document](#NonWebDocument), and the non-web document contains synchronized [media](#media) with [audio description](#audioDescription),  
the audio description should not interfere with relevant audio information in the synchronized media.

# 11 Software

## 11.0 General (informative)

This clause provides requirements for:

* [platform software](#platformSoftware);
* software that provides a user interface including content that is in the software;
* authoring tools;
* software that operates as assistive technology;
* mobile applications.

Note 1: [User agents](#userAgent) are examples of software that provide a [user interface](#userInterface). They retrieve, render and facilitate end user interaction with authored content. User agents play a necessary role in the accessibility of authored content rendered in the user interface. UAAG 2.0 [i.33] provides additional advice for those who are creating user agents and want to increase functionality when rendering authored content in an accessible way.

Note 2: The requirements for Web content, including software that is Web content, can be found in clause 9.

Note 3: When parts of [non-web software](#nonWebSoftware), such as mobile apps, are implemented with web views, such a view is embedded in the app and thus does not meet the definition of web page. The clause 11 “Software” requirements are the appropriate requirements to be applied to these web views. There are no circumstances in which clause 9 requirements and the corresponding clause 11 requirements are both applicable. Where there is any doubt, clause 11 requirements have precedence.

Note 4: The requirements for documents, that may be presented by user agents, can be found in clause 10.

Note 5: Although the accessibility of command line interfaces is not dealt with in the present document, accessibility may be achieved by context specific requirements, some of which may be found in clauses 5 or 11.

Requirements in clauses 11.1 to 11.5 apply to software:

* that is not a web page;
* not [embedded](#embedded) in web pages nor used in the rendering or functioning of the page.

Clause 9 provides requirements for software that is in web pages or that is embedded in web pages and that is used in the rendering or that is intended to be rendered together with the web page in which it is embedded.

Some requirements in clauses 11.1 to 11.5 have different versions for open or closed functionality. In those cases, the corresponding clause will be divided into two subclauses.

The success criteria set out in clauses 11.1 to 11.5 are intended to harmonize with the W3C Working Group Note [i.26] produced by the W3C's [WCAG2ICT Task Force](http://www.w3.org/WAI/GL/WCAG2ICT-TF/).

Note 6: Where the meaning of WCAG glossary terms when applied to [non-web software](#nonWebSoftware) is unclear, reference to the [Glossary Items with Specific Guidance](https://www.w3.org/TR/wcag2ict-22/" \l "glossary-items-with-specific-guidance), in the Working Group Note [i.26], can help to clarify how they are to be understood.

Note 7: Software that provides a user interface includes its own content. Some examples of content in software include: the controls and text displayed in a [menu](#menu) bar of a graphical user interface application, images that appear in a toolbar, prompts spoken in an auditory user interface, other user interaction controls, and other text, graphics or material that is not loaded from outside the software.

Note 8: "Void" clauses have been inserted in order to maintain alignment of the numbering in clauses 9, 10 and 11.

## 11.1 Perceivable

### 11.1.1 Text alternatives

#### 11.1.1.1 Non-text content (was 11.1.1.1.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy [WCAG 2.2 Success Criterion 1.1.1 Non-text content](https://www.w3.org/TR/WCAG22/" \l "non-text-content).

Note: CAPTCHAs do not currently appear outside of the Web. However, if they do appear, this guidance is accurate.

### 11.1.2 Time-based media

#### 11.1.2.1 Audio-only and video-only (pre-recorded) (was 11.1.2.1.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,  
the functionality that is not closed shall satisfy the [WCAG 2.2 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-only-and-video-only-prerecorded).

Note: The alternative can be provided directly in the software - or provided in an alternate version that meets the success criterion.

#### 11.1.2.2 Captions (pre-recorded)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "captions-prerecorded).

Note: The WCAG 2.2 definition of "captions" notes that "in some countries, captions are called subtitles". They are also sometimes referred to as "subtitles for the hearing impaired". Per the definition in WCAG 2.2, to meet this success criterion, whether called captions or subtitles, they would have to provide "synchronized visual and / or text alternative for both speech and non-speech audio information needed to understand the media content" where non-speech information includes "sound effects, music, laughter, speaker identification and location".

#### 11.1.2.3 Audio description or media alternative (pre-recorded) (was 11.1.2.3.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy the [WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-or-media-alternative-prerecorded).

Note 1: The WCAG 2.2 definition of "audio description" says that "audio description" is "also called 'video description' and 'descriptive narration'".

Note 2: Secondary or alternate audio tracks are commonly used for this purpose.

#### 11.1.2.4 Captions (live)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 1.2.4 Captions (Live)](https://www.w3.org/TR/WCAG22/" \l "captions-live).

Note: The WCAG 2.2 definition of "captions" notes that "in some countries, captions are called subtitles". They are also sometimes referred to as "subtitles for the hearing impaired". Per the definition in WCAG 2.2, to meet this success criterion, whether called captions or subtitles, they would have to provide "synchronized visual and / or text alternative for both speech and non-speech audio information needed to understand the media content" where non-speech information includes "sound effects, music, laughter, speaker identification and location".

#### 11.1.2.5 Audio description (pre-recorded)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-prerecorded).

Note 1: The WCAG 2.2 definition of "audio description" says that audio description is "Also called 'video description' and 'descriptive narration'".

Note 2: Secondary or alternate audio tracks are commonly used for this purpose.

### 11.1.3 Adaptable

#### 11.1.3.1 Info and relationships (was 11.1.3.1.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy the [WCAG 2.2 Success Criterion 1.3.1 Info and Relationships](https://www.w3.org/TR/WCAG22/" \l "info-and-relationships).

Note: In software, programmatic determinability is best achieved through the use of accessibility services provided by [platform software](#platformSoftware) to enable interoperability between software and assistive technologies and accessibility features of software. (see clause 11.5 Interoperability with assistive technology).

#### 11.1.3.2 Meaningful sequence (was 11.1.3.2.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy the [WCAG 2.2 Success Criterion 1.3.2 Meaningful Sequence](https://www.w3.org/TR/WCAG22/" \l "meaningful-sequence).

#### 11.1.3.3 Sensory characteristics

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 1.3.3 Sensory Characteristics](https://www.w3.org/TR/WCAG22/" \l "sensory-characteristics).

#### 11.1.3.4 Orientation

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 1.3.4 Orientation](https://www.w3.org/TR/WCAG22/" \l "orientation).

#### 11.1.3.5 Identify input purpose (was 11.1.3.5.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy the [WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose](https://www.w3.org/TR/WCAG22/" \l "identify-input-purpose).

### 11.1.4 Distinguishable

#### 11.1.4.1 Use of colour

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 1.4.1 Use of Color](https://www.w3.org/TR/WCAG22/" \l "use-of-color).

#### 11.1.4.2 Audio control

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the success criterion in Table 11.1.

Table 11.1: Software success criterion: Audio control

|  |
| --- |
| If any audio in a software plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. |
| Note 1: Since any part of a software that does not meet this success criterion can interfere with a user's ability to use the whole software, all content in the software (whether or not it is used to meet other success criteria) shall meet this success criterion. |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 1.4.2 Audio Control](https://www.w3.org/TR/WCAG22/" \l "audio-control) replacing "on a Web page" with "in a software", "any content" with "any part of a software", "whole page" with "whole software", "on the Web page" with "in the software", removing "See Conformance Requirement 5: Non-Interference" and adding note 1. |

#### 11.1.4.3 Contrast (minimum)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 1.4.3 Contrast (Minimum)](https://www.w3.org/TR/WCAG22/" \l "contrast-minimum).

#### 11.1.4.4 Resize text (was 11.1.4.4.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and that supports access to enlargement features of the [platform](#platformSoftware) or [assistive technology](#assistiveTechnology),   
the software shall satisfy the [WCAG 2.2 Success Criterion 1.4.4 Resize text](https://www.w3.org/TR/WCAG22/" \l "resize-text).

Note 1: Content for which there are software players, viewers or editors with a 200 percent zoom feature would automatically meet this success criterion when used with such players, unless the content will not work with zoom.

Note 2: This success criterion is about the ability to allow users to enlarge the text on screen at least up to 200 % without needing to use assistive technologies. This means that the application provides some means for enlarging the text 200 % (zoom or otherwise) without loss of content or functionality or that the application works with the platform features that meet this requirement.

#### 11.1.4.5 Images of text (was 11.1.4.5.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy the [WCAG 2.2 Success Criterion 1.4.5 Images of Text](https://www.w3.org/TR/WCAG22/" \l "images-of-text).

#### 11.1.4.6 Void

#### 11.1.4.7 Void

#### 11.1.4.8 Void

#### 11.1.4.9 Void

#### 11.1.4.10 Reflow

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the success criterion in Table 11.2.

Table 11.2: Software success criterion: Reflow

|  |
| --- |
| Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:   * Vertical scrolling content at a width equivalent to 320 CSS pixels; * Horizontal scrolling content at a height equivalent to 256 CSS pixels;   Except for parts of the content which require two-dimensional layout for usage or meaning. |
| Note 1: 320 CSS pixels is equivalent to a starting viewport width of 1 280 CSS pixels wide at 400 % zoom. For non-web software which are designed to scroll horizontally (e.g. with vertical text), the 256 CSS pixels is equivalent to a starting viewport height of 1 024 px at 400 % zoom. |
| Note 2: Examples of content which require two-dimensional layout are images, maps, diagrams, video, games, presentations, data tables, and interfaces where it is necessary to keep toolbars in view while manipulating content. |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 1.4.10 Reflow](https://www.w3.org/TR/WCAG22/" \l "reflow) replacing the original WCAG 2.2 notes with notes 1 and 2, above. |

#### 11.1.4.11 Non-text contrast

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy [WCAG 2.2 Success Criterion 1.4.11 Non-text Contrast](https://www.w3.org/TR/WCAG22/" \l "non-text-contrast).

#### 11.1.4.12 Text spacing

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and and where the content is implemented using markup languages, and where users are allowed to modify text spacing properties ,  
the software shall satisfy [WCAG 2.2 Success Criterion 1.4.12 Text spacing](https://www.w3.org/TR/WCAG22/" \l "text-spacing).

#### 11.1.4.13 Content on hover or focus

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and any visual presentation of the additional content caused by a hover or focus is not controlled by the user agent or platform software, and is not modified by the author,  
the software shall satisfy [WCAG 2.2 Success Criterion 1.4.13 Content on Hover or Focus](https://www.w3.org/TR/WCAG22/" \l "content-on-hover-or-focus).

## 11.2 Operable

### 11.2.1 Keyboard accessible

#### 11.2.1.1 Keyboard (was 11.2.1.1.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and that provides a keyboard or accepts input from a keyboard or keyboard interface,   
the software shall satisfy the [WCAG 2.2 Success Criterion 2.1.1 Keyboard](https://www.w3.org/TR/WCAG22/" \l "keyboard).

Note: This does not imply that software is required to directly support a keyboard or "keyboard interface". Nor does it imply that software is required to provide a soft keyboard. Underlying platform software may provide device independent input services to applications that enable operation via a keyboard. Software that supports operation via such platform device independent services would be operable by a keyboard and would comply.

#### 11.2.1.2 No keyboard trap

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the success criterion in Table 11.3.

Table 11.3: Software success criterion: No keyboard trap

|  |
| --- |
| If keyboard focus can be moved to a component of the software using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away. |
| Note 1: Since any part of a software that does not meet this success criterion can interfere with a user's ability to use the whole software, it is necessary for all content in the software (whether or not it is used to meet other success criteria) to meet this success criterion. |
| Note 2: Standard exit methods may vary by platform. For example, on many desktop platforms, the Escape key is a standard method for exiting. |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.1.2 No Keyboard Trap](https://www.w3.org/TR/WCAG22/" \l "no-keyboard-trap) replacing "content", "page" and "Web page" with "software", removing "See Conformance Requirement 5: Non-Interference" and with the addition of note 2 above and with note 1 above re-drafted to avoid the use of the word "shall". |

#### 11.2.1.3 Void

#### 11.2.1.4 Character key shortcuts (was 11.2.1.4.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and that provides a keyboard or accepts input from a keyboard or keyboard interface,   
the software shall satisfy [WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts](https://www.w3.org/TR/WCAG22/" \l "character-key-shortcuts).

### 11.2.2 Enough time

#### 11.2.2.1 Timing adjustable

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the success criterion in Table 11.4.

Table 11.4: Software success criterion: Timing adjustable

|  |
| --- |
| For each time limit that is set by the software, at least one of the following is true:   * **Turn off:** The user is allowed to turn off the time limit before encountering it; or * **Adjust:** The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or * **Extend:** The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or * **Real-time Exception:** The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or * **Essential Exception:** The time limit is essential and extending it would invalidate the activity; or * **20 Hour Exception:** The time limit is longer than 20 hours. |
| Note 1: This success criterion helps ensure that users can complete tasks without unexpected changes in content or context that are a result of a time limit. This success criterion should be considered in conjunction with [WCAG 2.2 Success Criterion 3.2.1 On Focus](https://www.w3.org/TR/WCAG22/" \l "on-focus), which puts limits on changes of content or context as a result of user action. |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.2.1 Timing Adjustable](https://www.w3.org/TR/WCAG22/" \l "timing-adjustable) replacing "the content" with "software" and with the words "WCAG 2.2" added before the word "Success Criterion" in note 1 above. |

#### 11.2.2.2 Pause, stop, hide

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the success criterion in Table 11.5.

Table 11.5: Software success criterion: Pause, stop, hide

|  |
| --- |
| For moving, blinking, scrolling, or auto-updating information, all of the following are true:   * **Moving, blinking, scrolling:** For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and * **Auto-updating:** For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential. |
| Note 1: For requirements related to flickering or flashing content, refer to [WCAG 2.2 Guideline 2.3](https://www.w3.org/TR/WCAG22/" \l "seizures-and-physical-reactions). |
| Note 2: This success criteria is applicable to all content in the software (whether or not there is an alternate accessible mode of operation of the software) since any part of a software that does not meet this success criterion can interfere with a user's ability to use the whole software (including a user interface element that enables the user to activate the alternate accessible mode of operation). |
| Note 3: Content that is updated periodically by software is not required to preserve or present information that is generated or received between the initiation of the pause and resuming presentation, as this may not be technically possible, and in many situations could be misleading to do so. |
| Note 4: An animation that occurs as part of a preload phase or similar situation can be considered essential if interaction cannot occur during that phase for all users and if not indicating progress could confuse users or cause them to think that content was frozen or broken. |
| Note 5: This is to be applied to all content. Any content, whether informative or decorative, that is updated automatically, blinks, or moves may create an accessibility barrier. |
| Note 6: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.2.2 Pause, Stop, Hide](https://www.w3.org/TR/WCAG22/" \l "pause-stop-hide) replacing "page" and "Web page" with "software", removing "See Conformance Requirement 5: Non-Interference" in note 2 of the success criterion, with the words "WCAG 2.2" added before the word "Guideline" in note 1 above, with note 2 above re-drafted to avoid the use of the word "must" and with the addition of note 5 above. |

### 11.2.3 Seizures and physical reactions

#### 11.2.3.1 Three flashes or below threshold

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the success criterion in Table 11.6.

Table 11.6: Software success criterion: Three flashes or below threshold

|  |
| --- |
| Software does not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds. |
| Note 1: This success criteria is applicable to all content in the software (whether or not there is an alternate accessible mode of operation of the software) since any part of a software that does not meet this success criterion can interfere with a user's ability to use the whole software (including a user interface element that enables the user to activate the alternate accessible mode of operation). |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.3.1 Three Flashes or Below Threshold](https://www.w3.org/TR/WCAG22/" \l "three-flashes-or-below-threshold) replacing "Web pages" with "software", "the whole page" with "the whole software", "the Web page" with "the software" and removing "See Conformance Requirement 5: Non-Interference" and with note 1 above re-drafted to avoid the use of the word "must". |

### 11.2.4 Navigable

#### 11.2.4.1 Void

Note 1: WCAG 2.2 Success Criterion 2.4.1 "Bypass blocks" does not apply to single software programs, but to a specific definition of "sets of software programs" that are extremely rare.

Note 2: Although not a requirement, it is generally considered best practice, and to address user needs, to be able to bypass blocks of content that are repeated within software.

#### 11.2.4.2 Void

Note 1: WCAG 2.2 Success Criterion 2.4.2 "Page titled" does not apply to single software programs, but to a specific definition of "sets of software programs" that are extremely rare.

Note 2: Although the name of a software product could be a sufficient title if it describes the topic or purpose, software names are trademarked and trademark names cannot by law be descriptive names. It is not practical to make software names both unique and descriptive.

#### 11.2.4.3 Focus order

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and that provides a keyboard or accepts input from a keyboard or keyboard interface,  
the software shall satisfy the success criterion in Table 11.7.

Table 11.7: Software success criterion: Focus order

|  |
| --- |
| If software can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability. |
| Note: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.4.3 Focus Order](https://www.w3.org/TR/WCAG22/" \l "focus-order) replacing "Web page" with "software". |

#### 11.2.4.4 Link purpose (in context)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy [WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context)](https://www.w3.org/TR/WCAG22/" \l "link-purpose-in-context).

#### 11.2.4.5 Void

Note: WCAG 2.2 Success Criterion 2.4.5 "Multiple ways" applies to "Sets" of web pages. In software, the equivalent to "sets of web pages" would be "sets of software", but these are extremely rare and an equivalent is not included in this clause on software requirements.

#### 11.2.4.6 Headings and labels

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 2.4.6 Headings and Labels](https://www.w3.org/TR/WCAG22/" \l "headings-and-labels).

Note: In software, headings and labels are used to describe sections of content and controls respectively. In some cases it may be unclear whether a piece of static text is a heading or a label. But whether treated as a label or a heading, the requirement is the same: that if they are present they describe the topic or purpose of the item(s) they are associated with.

#### 11.2.4.7 Focus visible

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 2.4.7 Focus Visible](https://www.w3.org/TR/WCAG22/" \l "focus-visible).

#### 11.2.4.8 Void

#### 11.2.4.9 Void

#### 11.2.4.10 Void

#### 11.2.4.11 Focus not obscured (minimum)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 2.4.11 Focus not obscured (minimum)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-minimum).

### 11.2.5 Input modalities

#### 11.2.5.1 Pointer gestures

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and that provides a pointing mechanism or accepts input from pointing devices,  
the software shall satisfy the success criterion in Table 11.8.

Table 11.8: Software success criterion: Pointer gestures

|  |
| --- |
| All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential. |
| Note 1: This requirement applies to non-web software that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology). |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG22/" \l "pointer-gestures) replacing the original WCAG 2.2 note with note 1 above. |

#### 11.2.5.2 Pointer cancellation

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and that provides a pointing mechanism or accepts input from pointing devices,  
the software shall satisfy the success criterion in Table 11.9.

Table 11.9: Software success criterion: Pointer cancellation

|  |
| --- |
| For functionality that can be operated using a single pointer, at least one of the following is true:   * No Down-Event: The down-event of the pointer is not used to execute any part of the function. * Abort or Undo: Completion of the function is on the up-event, and a mechanism is available to abort the function before completion or to undo the function after completion. * Up Reversal: The up-event reverses any outcome of the preceding down-event. * Essential: Completing the function on the down-event is essential. |
| Note 1: Functions that emulate a keyboard or numeric keypad key press are considered essential. |
| Note 2: This requirement applies to non-web software that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology). |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 2.5.2 Pointer Cancellation](https://www.w3.org/TR/WCAG22/" \l "pointer-cancellation) replacing the original WCAG 2.2 note with notes 1 and 2 above. |

#### 11.2.5.3 Label in name (was 11.2.5.3.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,  
the functionality that is not closed shall satisfy [WCAG 2.2 Success Criterion 2.5.3 Label in Name](https://www.w3.org/TR/WCAG22/" \l "label-in-name).

#### 11.2.5.4 Motion actuation

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy [WCAG 2.2 Success Criterion 2.5.4 Motion Actuation](https://www.w3.org/TR/WCAG22/" \l "motion-actuation).

#### 11.2.5.5 Void

#### 11.2.5.6 Void

#### 11.2.5.7 Dragging movements

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy [WCAG 2.2 Success Criterion 2.5.7 Dragging Movements](https://www.w3.org/TR/WCAG22/" \l "dragging-movements).

#### 11.2.5.8 Target size (minimum)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy [WCAG 2.2 Success Criterion 2.5.8 Target Size (Minimum)](https://www.w3.org/TR/WCAG22/" \l "target-size-minimum).

## 11.3 Understandable

### 11.3.1 Readable

#### 11.3.1.1 Language of software (was 11.3.1.1.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy the success criterion in Table 11.10.

Table 11.10: Software success criterion: Language of software

|  |
| --- |
| The default human language of software can be programmatically determined. |
| Note 1: Where software platforms provide a "locale / language" setting, applications that use that setting and render their interface in that "locale / language" would comply with this success criterion. Applications that do not use the platform "locale / language" setting but instead use an accessibility-supported method for exposing the human language of the software would also comply with this success criterion. Applications implemented in technologies where assistive technologies cannot determine the human language and that do not support the platform "locale / language" setting may not be able to meet this success criterion in that locale / language. |
| Note 2: This success criterion is identical to the [WCAG 2.2 Success Criterion 3.1.1 Language of Page](https://www.w3.org/TR/WCAG22/" \l "language-of-page), replacing "each web page" with "software" and with the addition of note 1 above. |

#### 11.3.1.2 Void

Note: To apply WCAG 2.2 Success Criterion 3.1.2 "Language of parts" to software would require the marking-up of all text in all locations within the software. This would be impossible so an equivalent is not included in this clause on software requirements.

### 11.3.2 Predictable

#### 11.3.2.1 On focus

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 3.2.1 On Focus](https://www.w3.org/TR/WCAG22/" \l "on-focus).

Note: Some compound documents and their user agents are designed to provide significantly different viewing and editing functionality depending upon what portion of the compound document is being interacted with (e.g. a presentation that contains an embedded spreadsheet, where the [menu](#menu)s and toolbars of the user agent change depending upon whether the user is interacting with the presentation content, or the embedded spreadsheet content). If the user uses a mechanism other than putting focus on that portion of the compound document with which they mean to interact (e.g. by a [menu](#menu) choice or special keyboard gesture), any resulting change of context would not be subject to this success criterion because it was not caused by a change of focus.

#### 11.3.2.2 On input

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 3.2.2 On Input](https://www.w3.org/TR/WCAG22/" \l "on-input).

#### 11.3.2.3 Void

Note: WCAG 2.2 Success Criterion 3.2.3 "Consistent navigation" applies to "Sets" of web pages. While consistency within software is desirable, "sets of software" in the same sense as "sets of web pages", are extremely rare and an equivalent is not included in this clause on software requirements.

#### 11.3.2.4 Consistent identification

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
components that have the same functionality within a software program shall be identified consistently, except where not doing so is essential to the function of the software.

Note 1: Consistent does not mean identical, but that the characteristics of the identifiers (such as text and look) are as similar as practical to reflect the fact that they identify the same functionality.

Note 2: This requirement is based on [WCAG 2.2 3.2.4 “Consistent identification”](https://www.w3.org/TR/WCAG22/" \l "consistent-identification), but replacing the scope from a “set of web pages” to "a software program", in order to make it more relevant for non-web software.

#### 11.3.2.5 Void

#### 11.3.2.6 Void

Note: WCAG 2.2 Success Criterion 3.2.6 for "Consistent help" applies to "Sets" of web pages. While consistency within software is desirable, "sets of software" in the same sense as "sets of web pages", are extremely rare and an equivalent is not included in this clause on software requirements.

### 11.3.3 Input assistance

#### 11.3.3.1 Error identification (was 11.3.3.1.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy the [WCAG 2.2 Success Criterion 3.3.1 Error Identification](https://www.w3.org/TR/WCAG22/" \l "error-identification).

#### 11.3.3.2 Labels or instructions

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions](https://www.w3.org/TR/WCAG22/" \l "labels-or-instructions).

#### 11.3.3.3 Error suggestion

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the [WCAG 2.2 Success Criterion 3.3.3 Error Suggestion](https://www.w3.org/TR/WCAG22/" \l "error-suggestion).

#### 11.3.3.4 Error prevention (legal, financial, data)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy the success criterion in Table 11.11.

Table 11.11: Software success criterion: Error prevention (legal, financial, data)

|  |
| --- |
| For software that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true:  1) Reversible: Submissions are reversible.  2) Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.  3) Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. |
| Note: This success criterion is identical to the [WCAG 2.2 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data)](https://www.w3.org/TR/WCAG22/" \l "error-prevention-legal-financial-data) replacing "web pages" with "software". |

#### 11.3.3.5 Void

#### 11.3.3.6 Void

#### 11.3.3.7 Redundant entry

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy [WCAG 2.2 Success Criterion 3.3.7 Redundant Entry](https://www.w3.org/TR/WCAG22/" \l "redundant-entry).

#### 11.3.3.8 Accessible authentication (minimum)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the [software](#NonWebDocument) shall satisfy [WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-minimum).

## 11.4 Robust

### 11.4.1 Compatible

#### 11.4.1.1 Void

Note: Earlier versions of the present document referenced the [4.1.1 Parsing](https://www.w3.org/TR/WCAG20/" \l "ensure-compat-parses) success criterion from WCAG 2.0 [i.41] and WCAG 2.1 [i.42]. In WCAG 2.2 [4], this criterion has been removed, because the accessibility problems it was intended to prevent “either no longer exist or are addressed by other criteria”.



#### 11.4.1.2 Name, role, value (was 11.4.1.2.1)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and the software includes functionality that is not closed to programmatic access of information by assistive technologies,   
the functionality that is not closed shall satisfy the success criterion in Table 11.12.

Table 11.12: Software success criterion: Name, role, value

|  |
| --- |
| For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies. |
| Note 1: This success criterion is primarily for software developers who develop or use custom user interface components. Standard user interface components on most accessibility-supported platforms already meet this success criterion when used according to specification. |
| Note 2: For conforming to this success criterion, it is usually best practice for software user interfaces to use the accessibility services provided by platform software. These accessibility services enable interoperability between software user interfaces and both assistive technologies and accessibility features of software in standardised ways. Most platform accessibility services go beyond programmatic exposure of name and role, and programmatic setting of states, properties and values (and notification of same), and specify additional information that could or should be exposed and / or set (for instance, a list of the available actions for a given user interface component, and a means to programmatically execute one of the listed actions). |
| Note 3: This success criterion is identical to the [WCAG 2.2 Success Criterion 4.1.2 Name, Role, Value](https://www.w3.org/TR/WCAG22/" \l "name-role-value) replacing the original WCAG 2.2 note with: "This success criterion is primarily for software developers who develop or use custom user interface components. Standard user interface components on most accessibility-supported platforms already meet this success criterion when used according to specification." and the addition of note 2 above. |

#### 11.4.1.3 Status messages

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall satisfy [WCAG 2.2 Success Criterion 4.1.3 Status Messages](https://www.w3.org/TR/WCAG22/" \l "status-messages).

## 11.5 Interoperability with keyboards and assistive technology

### 11.5.1 Closed functionality

Where ICT is, or includes, non-web software that provides a user interface, and that software has [closed functionality](#closedFunctionality),  
the [closed functionality](#closedFunctionality) of the software shall meet clause 5.1 instead of clause 11.5.2 to clause 11.5.2.17.

Note: For clarity, clause 11.5.2 to clause 11.5.2.17 do not need to be met for closed functionality of the software. Clause 11.5.2 to 11.5.2.17 will still need to be met for all other functionality of the software.

### 11.5.2 Accessibility services

11.5.2.1 Platform interoperability with assistive technologies

Where ICT is, or includes, [platform software](#platformSoftware),  
the platform software shall provide a set of [documented platform accessibility services](#documentedplatformaccessibilityservice) that cover any [user interface](#userInterface) concept corresponding to clauses 11.5.2.5 to 11.5.2.17 supported within the platform software.

Note 1: Depending on the platform, the [documented platform accessibility services](#documentedplatformaccessibilityservice) addressed in this clause may be referred to by different names, such as accessibility services or accessibility API.

Note 2: Some platforms include services for user interface development that provide accessibility support by default (e.g. the service for creating a new user interface element provides role, state, boundary, name and description). These services are considered to be part of the services provided to meet this clause.

Note 3: To comply with this requirement, platform software can provide its own set of services or expose the services provided by its underlying platform layers, if those services meet this requirement.

Note 4: The definition of platform in clause 3.1 applies to software that provides services to other software, including but not limited to, operating systems, web browsers, virtual machines.

#### 11.5.2.2 Void

Note: This clause from previous versions of the EN 301 549 has been merged in with clause 11.5.2.1.

#### 11.5.2.3 Use of accessibility services (recommendation)

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software should use the applicable [documented platform accessibility services](#documentedplatformaccessibilityservice) listed in clause 11.5.2.1. If the [documented platform accessibility services](#documentedplatformaccessibilityservice) do not allow the software to meet the [applicable requirement](#applicablerequirement)s of clauses 11.5.2.5 to 11.5.2.17, then software that provides a user interface should use other [documented platform services](#documentedplatformservice) to interoperate with [assistive technology](#assistiveTechnology).

Note: It is best practice to develop software using toolkits that automatically implement the underlying platform accessibility services.

#### 11.5.2.4 Assistive technology

Where ICT is, or includes, [assistive technology](#assistiveTechnology),   
the assistive technology shall use the [documented platform accessibility services](#documentedplatformaccessibilityservice) corresponding to clauses 11.5.2.5 to 11.5.2.17.

Note: Assistive technology can also use other documented accessibility services.

#### 11.5.2.5 Object information

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, make the [user interface elements](#userInterfaceElement)' role, state(s), boundary, name, and description [programmatically determinable](#programmaticallyDeterminable) by assistive technologies.

#### 11.5.2.6 Row, column, and headers

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, make the row and column of each cell in a data table, including headers of the row and column if present, [programmatically determinable](#programmaticallyDeterminable) by assistive technologies.

#### 11.5.2.7 Values

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, make the current value of a [user interface element](#userInterfaceElement) and any minimum or maximum values of the range, if the user interface element conveys information about a range of values, [programmatically determinable](#programmaticallyDeterminable) by assistive technologies.

#### 11.5.2.8 Label relationships

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall expose the relationship that a [user interface element](#userInterfaceElement) has as a label for another element, or of being labelled by another element, using the services as described in clause 11.5.2.3, so that this information is [programmatically determinable](#programmaticallyDeterminable) by assistive technologies.

#### 11.5.2.9 Parent-child relationships

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, make the relationship between a [user interface element](#userInterfaceElement) and any parent or children elements [programmatically determinable](#programmaticallyDeterminable) by assistive technologies.

#### 11.5.2.10 Text

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and renders text to a screen,  
the software shall, by using the services as described in clause 11.5.2.3, make the text contents, text attributes used or available for user generated [content](#content), and the boundary of text [programmatically determinable](#programmaticallyDeterminable) by assistive technologies.

Note 1: Depending on the software, the attributes of text may include but are not limited to different visual features, such as size and colour, and style aspects such as boldness and underlining.

#### 11.5.2.11 List of available actions

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, make a list of available actions that can be executed on a [user interface element](#userInterfaceElement), [programmatically determinable](#programmaticallyDeterminable) by assistive technologies.

#### 11.5.2.12 Execution of available actions

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall, by using the services as described in clause 11.5.2.3, allow the programmatic execution of the actions exposed according to clause 11.5.2.11 by assistive technologies where permitted by security requirements.

Note 1: In some cases the security requirements imposed on a software product may forbid external software from interfering with the ICT product and so this requirement would not apply. Examples of systems under strict security requirements are systems dealing with intelligence activities, cryptologic activities related to national security, command and control of military forces.

Note 2: Assistive technologies may be required to maintain the same level of security as the standard input mechanisms supported by the platform.

#### 11.5.2.13 Tracking of focus and selection attributes

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, make information and mechanisms necessary to track focus, text insertion point, and selection attributes of [user interface elements](#userInterfaceElement) [programmatically determinable](#programmaticallyDeterminable) by assistive technologies.

#### 11.5.2.14 Modification of focus and selection attributes

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, allow assistive technologies to programmatically modify focus, text insertion point, and selection attributes of [user interface elements](#userInterfaceElement) where the user can modify these items where permitted by security requirements.

Note 1: In some cases the security requirements imposed on a software product may forbid external software from interfering with the ICT product and so this requirement would not apply. Examples of systems under strict security requirements are systems dealing with intelligence activities, cryptologic activities related to national security, command and control of military forces.

Note 2: Assistive technologies may be required to maintain the same level of security as the standard input mechanisms supported by the platform.

#### 11.5.2.15 Change notification

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, notify assistive technologies about changes in those [programmatically determinable](#programmaticallyDeterminable) attributes of [user interface elements](#userInterfaceElement) that are referenced in requirements 11.5.2.5 to 11.5.2.11 and 11.5.2.13.

#### 11.5.2.16 Modifications of states and properties

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall, by using the services as described in clause 11.5.2.3, allow assistive technologies to programmatically modify states and properties of [user interface elements](#userInterfaceElement), where the user can modify these items where permitted by security requirements.

Note 1: In some cases the security requirements imposed on a software product may forbid external software from interfering with the ICT product and so this requirement would not apply. Examples of systems under strict security requirements are systems dealing with intelligence activities, cryptologic activities related to national security, command and control of military forces.

Note 2: Assistive technologies may be required to maintain the same level of security as the standard input mechanisms supported by the platform.

#### 11.5.2.17 Modifications of values and text

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),  
the software shall, by using the services as described in clause 11.5.2.3, allow assistive technologies to modify values and text of [user interface elements](#userInterfaceElement) using the input methods of the [platform](#platformSoftware), where a user can modify these items without the use of [assistive technology](#assistiveTechnology) where permitted by security requirements.

Note 1: In some cases the security requirements imposed on a software product may forbid external software from interfering with the ICT product and so this requirement would not apply. Examples of systems under strict security requirements are systems dealing with intelligence activities, cryptologic activities related to national security, command and control of military forces.

Note 2: Assistive technologies may be required to maintain the same level of security as the standard input mechanisms supported by the platform.

## 11.6 Documented accessibility features

### 11.6.1 User control of accessibility features

Where ICT is, or includes, [platform software](#platformSoftware),   
the platform software shall provide sufficient modes of operation for user control over those platform [accessibility](#accessibility) features documented as intended for users.

### 11.6.2 No disruption of accessibility features

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface),   
the software shall not disrupt those documented [accessibility](#accessibility) features that are defined in [platform](#platformSoftware) documentation except when requested to do so by the user during the operation of the software.

## 11.7 User preferences

Where ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface), and is not designed to be isolated from its [platform](#platformSoftware),   
that user interface shall follow the values of the user preferences that users have set for the [documented platform accessibility features](#documentedaccessibilityfeature).

Note 1: Software that is isolated from its underlying platform has no access to user settings in the platform and thus cannot adhere to them.

Note 2: This does not preclude the software from having additional values for a setting as long as there is one mode where the application will follow the system settings even if more restricted.

Note 3: [Documented platform accessibility features](#documentedaccessibilityfeature) of the user interfaces usually include colour, contrast, font type, font size, and space adjustments for characters, lines and paragraphs.

## 11.8 Authoring tools

### 11.8.0 General (informative)

For those creating web [content](#content) [authoring tools](#authoringTool), ATAG 2.0 [i.32] provides information that can be of interest to those who want to go beyond these requirements.

Note: This is applicable both to standalone and to web based authoring tools.

### 11.8.1 Content technology

Where ICT is, or includes, [authoring tool](#authoringTool) functionality,   
the authoring tool shall meet clauses 11.8.2 to 11.8.5 to the extent that information required for [accessibility](#accessibility) is supported by the format used for the output of the authoring tool.

### 11.8.2 Accessible content creation

Where ICT is, or includes, [authoring tool](#authoringTool) functionality,   
the authoring tool shall enable and guide the production of [content](#content) that conforms to [clauses 9 (Web)](#_9_Web) or [10  
(Non-web documents)](#_10_Non-web_documents) as applicable.

Note: Authoring tools may rely on additional tools where conformance with specific requirements is not achievable by a single tool. For example, a video editing tool may enable the creation of video files for distribution via broadcast television and the web, but authoring of caption files for multiple formats may be provided by a different tool.

### 11.8.3 Preservation of accessibility information in transformations

Where ICT is, or includes, [authoring tool](#authoringTool) functionality, and provides restructuring transformations or re-coding transformations,   
[accessibility](#accessibility) information shall be preserved in the output if equivalent mechanisms exist in the [content](#content) technology of the output.

Note 1: Restructuring transformations are transformations in which the content technology stays the same, but the structural features of the content are changed (e.g. linearizing tables, splitting a document into pages).

Note 2: Re-coding transformations are transformations in which the technology used to encode the content is changed.

### 11.8.4 Repair assistance

Where ICT is, or includes, [authoring tool](#authoringTool) functionality, and can detect that [content](#content) does not meet a requirement of clauses 9 (Web) or 10 (Non-web documents) as applicable,   
the authoring tool shall provide repair suggestion(s).

Note: This does not preclude automated and semi-automated repair which is possible (and encouraged) for many types of content accessibility problems.

### 11.8.5 Templates

Where ICT is, or includes, [authoring tool](#authoringTool) functionality, and provides templates,   
at least one template that supports the creation of [content](#content) that conforms to the requirements of clauses 9 (Web) or 10 ([Non-web document](#NonWebDocument)) as applicable shall be available and identified as such.

# 12 Documentation and support services

## 12.1 Product documentation

### 12.1.1 Accessibility and compatibility features

Where ICT includes product documentation, whether provided separately or integrated within the ICT,   
the documentation shall list and explain how to use the [accessibility](#accessibility) features of the ICT and its compatibility features with assistive technology.

Note 1: Accessibility and compatibility features include accessibility features that are built-in and accessibility features that provide compatibility with assistive technology.

Note 2: It is best practice to use the "Schema.org Accessibility Properties for Discoverability Vocabulary" [i.40] to provide meta data on the accessibility of the ICT.

Note 3: The accessibility statement and help pages are both examples of the provision of product information.

### 12.1.2 Accessible documentation

Where ICT is, or includes, product documentation,  
the documentation shall be made available in at least one of the following electronic formats:

1. a Web format that conforms to the requirements of clause 9; or
2. a non-web format that conforms to the requirements of clause 10.

Note 1: This does not preclude the possibility of also providing the product documentation in other formats (electronic, printed or audio) that are not accessible.

Note 2: It also does not preclude the possibility of providing alternate formats that meet the needs of some specific type of users (e.g. Braille documents for blind people or easy-to-read information for persons with limited cognitive, language and learning abilities).

Note 3: Where documentation is incorporated into the ICT, the documentation falls under the requirements for accessibility in the present document.

Note 4: A user agent that supports automatic media conversion would be beneficial to enhancing accessibility.

## 12.2 Support services

### 12.2.1 General (informative)

ICT support services include, but are not limited to: help desks, call centres, technical support, relay services and training services.

### 12.2.2 Information on accessibility and compatibility features

Where ICT is, or includes, support services,   
the services shall provide information on the [accessibility](#accessibility) and compatibility features that are mentioned in the product documentation.

Note: Accessibility and compatibility features include accessibility features that are built-in and accessibility features that provide compatibility with assistive technology.

### 12.2.3 Effective communication

Where ICT is, or includes, support services,   
the services shall accommodate the communication needs of individuals with disabilities either directly or through a referral point.

### 12.2.4 Accessible documentation

Where ICT is, or includes, support services, and the support services provide documentation,   
the documentation shall be made available in at least one of the following electronic formats:

1. a Web format that conforms to clause 9; or
2. a non-web format that conforms to clause 10.

Note 1: This does not preclude the possibility of also providing the documentation in other formats (electronic or printed) that are not accessible.

Note 2: It also does not preclude the possibility of providing alternate formats that meet the needs of some specific type of users (e.g. Braille documents for blind people or easy-to-read information for persons with limited cognitive, language and learning abilities).

Note 3: Where the support documentation is incorporated into the ICT, the documentation falls under the requirements for accessibility in the present document.

Note 4: A user agent that supports automatic media conversion would be beneficial to enhancing accessibility.

# 13 ICT providing relay or emergency service access

## 13.1 Relay services requirements

### 13.1.1 General (informative)

Relay services enable users with speech or hearing disabilities to communicate with other users of continuous bidirectional voice communication. The [relay services](#relayservice) operate by providing conversion between the communication modalities that allows each user to communicate in a modality that works for them. This has been done by humans or automation plus humans, but fully automated translation tools are now being implemented. There are also [relay services](#relayservice) supporting [primary users](#primaryuser) with cognitive and memory related disabilities.

In the present clause about relay services, the term "[primary user](#primaryuser)" is used for the users who use relay services because of a disability. Other communication users getting involved in communication via relay services are called "[secondary users](#secondaryuser)".

For communication between [primary users](#primaryuser) who are not capable of communicating directly with each other, relay services may be interconnected by the voice connection between the relay services, thus facilitating communication between the [primary users](#primaryuser).

Note 1: An example can be a person with hearing impairments being used to have support of a captioned telephony relay service complementing speech with text towards the primary user, communicating with a deaf sign language user communicating in sign language both ways and getting conversion to speech both ways by a video relay user. These two relay service users can communicate with each other by having their favourite relay services being connected directly through the voice channel.

The goal of the relay services is to provide accessibility to communication in continuous bidirectional voice [communication system](#communicationsystem). That implies that the [primary users](#primaryuser) are provided with the same features and functionality in the [communication systems](#communicationsystem) as other users. Clause 13.1.2 of the present document deals with functionality related to invocation and connection of communication, and clause 13.1.3 of the present document addresses the media transmission and modality conversion function, also including media transmission and [relay service](#relayservice) use in some special contexts.

For cases when the primary user needs to communicate in media not supported by the [communication system](#communicationsystem) where the [secondary user](#secondaryuser) resides, it is inevitable that the [primary user](#primaryuser) is a user of another [communication system](#communicationsystem) providing the needed media support.

Note 2: An example can be a [primary user](#primaryuser) who uses sign language natively, and who wants to reach and communicate with a [secondary user](#secondaryuser) who uses voice [communication system](#communicationsystem) but where the video is not provided, only voice and RTT. In this case, the [primary user](#primaryuser) uses one communication system that provides the video, and the [secondary user](#secondaryuser) is included via the relay service invocation system in the communication, but only with the voice and RTT channels enabled.

In cases when the [primary user](#primaryuser) needs to communicate in media supported by the [communication system](#communicationsystem) where the [secondary user](#secondaryuser) resides, there is still a need for use of relay service in communications where the [secondary user](#secondaryuser) has a reason to not use the communication modalities of the [primary user](#primaryuser). The communication can then be held within the [communication system](#communicationsystem) but with support by a relay service.

Note 3: An example can be a [primary user](#primaryuser) who uses sign language natively, and who wants to reach and communicate with a secondary user who cannot sign but is available in the same [communication system](#communicationsystem) that supports all three media, including video. In this case, the communication is held within the same [communication system](#communicationsystem), but still with a support of relay service that interprets the communication.

The types of possible relay services include, but are not limited to the following types, which are more completely described in ETSI ES 202 975 []:

1. Text relay services which provide conversion between real-time text and voice. Text relay services can be divided in the following three subtypes regarding their mediation directions:

* Bidirectional text relay service, which converts between speech and real-time text in both directions with the primary user both reading and sending text.
* Text relay service with voice through. which convert speech towards the [primary user](#primaryuser) to text and let speech through from the [primary user](#primaryuser).
* Text relay service with hearing through, which convert text from the [primary user](#primaryuser) to speech, and let speech through to the primary user.

1. Captioned telephony services which convert speech to real-time text towards the [primary user](#primaryuser) while letting voice through in both directions.
2. Video relay services which convert between sign language in video to and from [primary users](#primaryuser) and spoken language from and to [secondary users](#secondaryuser).
3. Speech-to-speech relay services which convert between unclear speech from the [primary user](#primaryuser) to clear speech to the secondary users, also letting speech through in both directions.
4. Lip-speaking relay services which convert from speech in a voice channel to lip-speaking in a video channel plus speech in a voice channel towards the [primary user](#primaryuser) and let voice through in the other direction.
5. Cognitive support services which provide support for memory and other cognitive functions in the voice channel in the direction towards the [primary user](#primaryuser) and let voice through in both directions.

For detailed guidelines on how to develop and implement relay service, it is best practice to meet the applicable [relay service](#relayservice) requirements of ETSI ES 202 975 [i.5].

[Relay service](#relayservice) access is also essential in emergency communication cases. These aspects are elaborated in ETSI TS 103 919 [i.58].

The general accessibility requirements contained in the clauses 13.1.2 and 13.1.3 of the present document are based on a conceptual configuration presented in Figure 13.1. The following functional entities may be separate, as indicated in the conceptual configuration, or may co-reside in the same system, depending on the media support, and if the separation is wanted or not for other reasons:

* [Primary user](#primaryuser) equipment. Including functionality for all media needed for access to real-time communication by the user with disabilities.
* [Communication system](#communicationsystem) of the [primary user](#primaryuser). A communication system supporting the media required by the [primary user](#primaryuser) and enabling connection of [relay services](#relayservice) as well as communications without [relay services](#relayservice).
* [Communication system](#communicationsystem) of [secondary users](#secondaryuser). Regular real time [communication system](#communicationsystem) with users with whom the [primary users](#primaryuser) want to have communication.
* [Relay service](#relayservice) provides the modality conversion between the primary and [secondary users](#secondaryuser).
* [Relay service](#relayservice) invocation system connects the [primary users](#primaryuser), [secondary users](#secondaryuser) and [relay services](#relayservice).

[Secondary user](#secondaryuser) equipment. The user equipment of the [secondary user](#secondaryuser) may or may not include the communication modalities that the [primary user](#primaryuser) depends on.

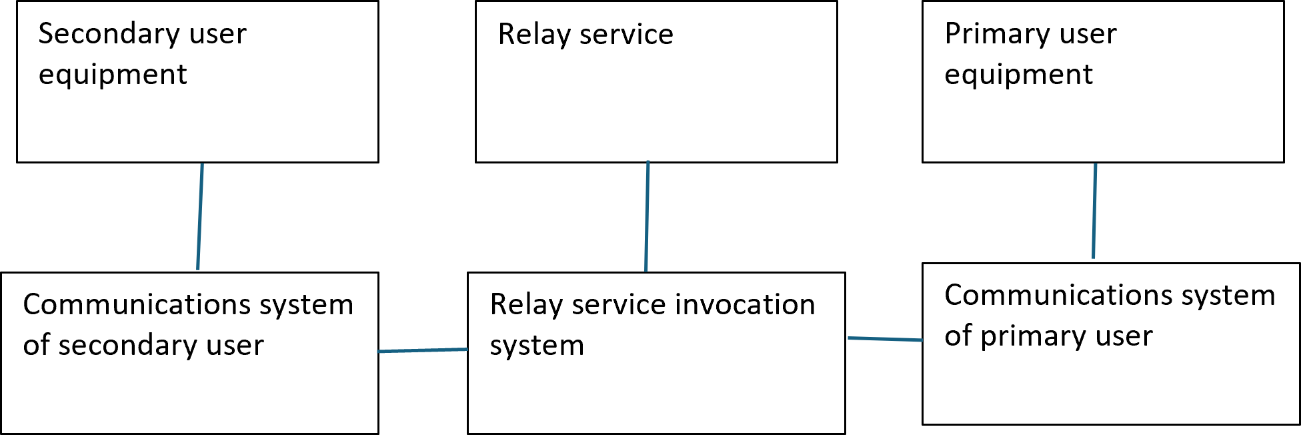


Figure 13.1 Conceptual view of relay service provision divided in functional entities which may co-reside in actual implementations

### 13.1.2 Relay service access

#### 13.1.2.1 General remarks on access to relay services (informational)

To ensure that the primary users of the relay service enjoy equivalent access to electronic communication, they need to have free choice of communicating with or without the support of relay services. For instance, primary users with hearing impairments who use an ICT communication system that includes alternatives to voice communication such as RTT or total conversation, and where these media are also used by the secondary users, should, if desired, be able to contact the secondary users using a common communication channel, without involvement of the relay services.

Clause 13.1.2 of the present document provides requirements for providing the access to relay services for the primary users that ensures their equivalent access to the communication services.

#### 13.1.2.2 Assignment of the user identifier for the primary users of relay services

Where ICT is, or includes, a relay service invocation system,  
the ICT shall assign unique user identifiers to primary users to be used in relayed communication with secondary users as caller identifiers in outgoing communications from the primary users, and as user identifiers used to address the primary users in incoming communications to them.

#### 13.1.2.3 Conveying of caller identifier in relayed communications for primary relay users

Where ICT is, or includes, a relay service invocation system,  
the ICT shall convey the caller identifiers of primary users of relay services in their communication establishments to secondary users, unless the calling user equipment is set to anonymous communication mode.

#### 13.1.2.4 Relay service invocation decision in outgoing communications

Where ICT is, or includes, a relay service invocation system,  
the ICT shall allow the user to decide by user action at the moment of initiating an outgoing communication if a relay service will be invoked in the communication or not.

Note: It is also good practice to provide automatic decision support and settings to tune the decision support to user needs.

#### 13.1.2.5 Relay service invocation decision in incoming communications

Where ICT is, or includes, a relay service invocation system,  
the ICT shall allow the user to decide by user action at the moment of receiving an incoming communication if a relay service will be invoked in the communication or not.

Note: It is also good practice to provide automatic decision support and settings to tune the decision support to user needs.

#### 13.1.2.6 Relay service support requested by the primary user for emergency communications

Where ICT is, or includes, a relay service invocation system,  
the ICT shall initiate and perform emergency communications on the request by the primary user with relay service invoked.

Note 1: The relay service is expected to allow invocations of PSAPs in a three-party fashion and perform the relaying action in the ways specified in ETSI TS 103 919 [] clause 7.2.6 and 7.3.5.

Note 2: This way of invoking relay services in emergency communications is seen as a fallback option and may optionally not provide all desired contextual information to the PSAP

### 13.1.3 Relay service requirements

#### 13.1.3.1 Relaying action in relay service communication

Where ICT is, or includes, a relay service,  
the relay service shall allow primary users with availability of the relay service to participate in speech communication with secondary users by performing modality conversion or communication support function according to the type and mode of operation of the relay service.

#### 13.1.3.2 Media handling in relay service communication

Where ICT is, or includes, a relay service,  
the relay service connection shall support all of the three media of total conversation between which the conversion is performed according to the type and mode of operation of the relay service, and passing-through media not involved in the conversion but commonly supported and enabled by the communication clients involved in the communication.

Note: Best practice is to allow the user to specify if they want the media being converted to also be passed on to the other user in addition to the conversion of its modality.

#### 13.1.3.3 Relay service support in ICT based conferences

Where ICT is, or includes, a relay service,  
the ICT shall support participation of primary relay service users in conferences and enable conference participation of users of the relay service.

Note 1: The extra modality conversions required by each user may be conveyed via the conference system or directly between the relay service and the user of the relay service.

Note 2: In order for the relay service to have the best information to successfully convey the conference voice communications the relay service should not only be able to hear the voice channel of the conference but also view all contents of the conference.

Note 3: Access to conferences is commonly provided via web or app interface.

#### 13.1.3.4 Relay service support during emergency communications initiated by the PSAP

Where ICT is, or includes, a relay service,  
the relay service shall accept invocations by emergency communication PSAPs.

Note: The relay service is expected to allow invocations by PSAPs in a three-party fashion and perform the relaying action in the ways specified in ETSI TS 103 919 [] clause 9 and 10.

## 13.2 Void

Note: Was access to relay services, now integrated in clause 13.1 of the present document.

## 13.3 Access to emergency services (informative)

The present document addresses the accessibility of emergency communication by means of the emergency communication-specific scenarios of clauses [6.0.6](#_6.0.6_Communication_client) to [6.09](#_6.0.9_Communication_system) and by specific references to emergency communication in some of the [clause C.6](#_C.6_ICT_supporting) conformance tests of the accessibility requirements.

# 14 Conformance (informative)

Conformance to the present document is achieved by meeting all the [applicable requirement](#applicablerequirement)s, these are clauses containing the word "shall". Those clauses containing the word "should" are recommendations and are not required for conformance.

All clauses except those in clause 12 are self-scoping. This means they are introduced with the phrase 'Where ICT <pre condition>'. A requirement is met when the pre-condition is true and the corresponding test (in Annex C) is passed. When one of the pre-conditions is false the requirement is not applicable. Consequently, the result of the tests in Annex C can be: not applicable, pass, fail, or (in exceptional circumstances) not testable.

ICT is often comprised of an assembly of two or more items of ICT. In some cases, two or more interoperable items of ICT may together meet more requirements of the standard when one item complements the functionality of the other and the sum together meets more of the accessibility requirements. However, combining two items of ICT, both of which fail to meet any particular requirement, will not lead to a combined ICT system that meets that requirement.

The present document does not prioritize requirements.

Note 1: Conformance with the accessibility requirements could be affected by subsequent implementation or maintenance.

Note 2: Sampling is frequently required on complex ICT when there are too many instances of the object to be tested. The present document cannot recommend specific ICT evaluation sampling techniques as these are context specific.

The inherent nature of certain situations makes it impossible to make reliable and definitive statements that accessibility requirements have been met. In those situations therefore, the requirements in the present document are not applicable:

* when the product is in a failure, repair or maintenance state where the ordinary set of input or output functions are not available;
* during those parts of start-up, shutdown, and other state transitions that can be completed without user interaction.

Note 3: Even in the above situations, it is best practice to apply requirements in the present document wherever it is feasible and safe to do so.

# Annex A (informative): ICT conformance evaluation

## A.1 Conformance with Directive 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies

The present document has been prepared under the Commission's standardisation request C(2017)2585 final [i.27] to provide one voluntary means of conforming to the essential requirements of Directive 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies [i.28].

Once the present document is cited in the Official Journal of the European Union under that Directive, conformance with the normative clauses of the present document given in Tables ZA.1 and ZA.2 (in Annex ZA) confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

[Tables ZA.1](#TAB_ZA1) and [ZA.2](#TAB_ZA2) can be used to evaluate whether a specific Web site or mobile application conforms with the requirements of Directive 2016/2102.

## A.2 Conformance with Directive 2019/882 on the accessibility requirements of products and services

The present document has been prepared under the Commission's standardisation request C(2022) 6456 final [M587] to provide one voluntary means of conforming to the essential requirements of Directive 2019/882 on the accessibility requirements of products and services [EAA].

Once the present document is cited in the Official Journal of the European Union under that Directive, conformance with the normative clauses of the present document given in Tables A.1 to A.5 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

**Important:**

**Each** of the clauses in Annex A.2 shall be considered, **in order**, to see whether the condition that is stated in the clause title, and in the introduction to the table within that clause, is applicable to the ICT being evaluated.

Where the condition stated in the clause title applies to the ICT being evaluated, then all of the requirements in the table within that clause shall be assessed to see if they apply to the ICT under evaluation. Table A.5 is applicable to all ICT.

When using the tables, each requirement shall be assessed using the test stated in the assessment column if the condition that appears in the “Condition” column applies to the ICT under evaluation.

**Key to Tables A.1 to A.N columns:**

**Clause:** The clause number that uniquely identifies a requirement.

**Requirement:** The title of the requirement

**Condition**: For conditional requirements this column describes the condition that has to be met for conformance with the clause to be a requirement.

**Assessment:** Indicates the clause of the present document that contains the relevant assessment method.

Presumption of conformity stays valid only as long as a reference to the present document is maintained in the list published in the Official Journal of the European Union. Users of the present document should consult frequently the latest list published in the Official Journal of the European Union.

Other Union legislation may be applicable to the product(s) falling within the scope of the present document.

### A.2.1 Where the ICT is, or includes, a web page

Requirements in clause A.2.1 apply to ICT that is, or includes, a [web page](#webPage) (as defined in clause 3.1) or web app including. If the ICT is not, or does not include a web page or web app, then clause A.2.2 should be considered next.

Table A.1: Where the ICT is, or includes, a web page

| **Clause** | **Requirement** | **Condition** | **Assessment** |
| --- | --- | --- | --- |
| [9.1.1.1](#_9.1.1.1_Non-text_content) | Non-text content | Where ICT is, or includes, a web page | [C.9.1.1.1](#_C.9.1.1.1_Non-text_content) |
| 9.1.2.1 | Audio-only and video-only (pre-recorded) | Where ICT is, or includes, a web page | C.9.1.2.1 |
| 9.1.2.2 | Captions (pre-recorded) | Where ICT is, or includes, a web page | C.9.1.2.2 |
| 9.1.2.3 | Audio description or media alternative (pre-recorded) | Where ICT is, or includes, a web page | C.9.1.2.3 |
| 9.1.2.5 | Audio description (pre-recorded) | Where ICT is, or includes, a web page | C.9.1.2.5 |
| 9.1.3.1 | Info and relationships | Where ICT is, or includes, a web page | C.9.1.3.1 |
| 9.1.3.2 | Meaningful sequence | Where ICT is, or includes, a web page | C.9.1.3.2 |
| 9.1.3.3 | Sensory characteristics | Where ICT is, or includes, a web page | C.9.1.3.3 |
| 9.1.3.4 | Orientation | Where ICT is, or includes, a web page | C.9.1.3.4 |
| 9.1.3.5 | Identify input purpose | Where ICT is, or includes, a web page | C.9.1.3.5 |
| 9.1.4.1 | Use of colour | Where ICT is, or includes, a web page | C.9.1.4.1 |
| 9.1.4.2 | Audio control | Where ICT is, or includes, a web page | C.9.1.4.2 |
| 9.1.4.3 | Contrast (minimum) | Where ICT is, or includes, a web page | C.9.1.4.3 |
| 9.1.4.4 | Resize text | Where ICT is, or includes, a web page | C.9.1.4.4 |
| 9.1.4.5 | Images of text | Where ICT is, or includes, a web page | C.9.1.4.5 |
| 9.1.4.10 | Reflow | Where ICT is, or includes, a web page | C.9.1.4.10 |
| 9.1.4.11 | Non-text contrast | Where ICT is, or includes, a web page | C.9.1.4.11 |
| 9.1.4.12 | Text spacing | Where ICT is, or includes, a web page | C.9.1.4.12 |
| 9.1.4.13 | Content on hover or focus | Where ICT is, or includes, a web page | C.9.1.4.13 |
| 9.2.1.1 | Keyboard | Where ICT is, or includes, a web page | C.9.2.1.1 |
| 9.2.1.2 | No keyboard trap | Where ICT is, or includes, a web page | C.9.2.1.2 |
| 9.2.1.4 | Character key shortcuts | Where ICT is, or includes, a web page | C.9.2.1.4 |
| 9.2.2.1 | Timing adjustable | Where ICT is, or includes, a web page | C.9.2.2.1 |
| 9.2.2.2 | Pause, stop, hide | Where ICT is, or includes, a web page | C.9.2.2.2 |
| 9.2.3.1 | Three flashes or below threshold | Where ICT is, or includes, a web page | C.9.2.3.1 |
| 9.2.4.1 | Bypass blocks | Where ICT is, or includes, a web page | C.9.2.4.1 |
| 9.2.4.2 | Page titled | Where ICT is, or includes, a web page | C.9.2.4.2 |
| 9.2.4.3 | Focus order | Where ICT is, or includes, a web page | C.9.2.4.3 |
| 9.2.4.4 | Link purpose (in context) | Where ICT is, or includes, a web page | C.9.2.4.4 |
| 9.2.4.5 | Multiple ways | Where ICT is, or includes, a web page | C.9.2.4.5 |
| 9.2.4.6 | Headings and labels | Where ICT is, or includes, a web page | C.9.2.4.6 |
| 9.2.4.7 | Focus visible | Where ICT is, or includes, a web page | C.9.2.4.7 |
| 9.2.4.11 | Focus not obscured (minimum) | Where ICT is, or includes, a web page | C.9.2.4.11 |
| 9.2.5.1 | Pointer gestures | Where ICT is, or includes, a web page | C.9.2.5.1 |
| 9.2.5.2 | Pointer cancellation | Where ICT is, or includes, a web page | C.9.2.5.2 |
| 9.2.5.3 | Label in name | Where ICT is, or includes, a web page | C.9.2.5.3 |
| 9.2.5.4 | Motion actuation | Where ICT is, or includes, a web page | C.9.2.5.4 |
| 9.2.5.7 | Dragging movements | Where ICT is, or includes, a web page | C.9.2.5.7 |
| 9.2.5.8 | Target size (minimum) | Where ICT is, or includes, a web page | C.9.2.5.8 |
| 9.3.1.1 | Language of page | Where ICT is, or includes, a web page | C.9.3.1.1 |
| 9.3.1.2 | Language of parts | Where ICT is, or includes, a web page | C.9.3.1.2 |
| 9.3.2.1 | On focus | Where ICT is, or includes, a web page | C.9.3.2.1 |
| 9.3.2.2 | On input | Where ICT is, or includes, a web page | C.9.3.2.2 |
| 9.3.2.3 | Consistent navigation | Where ICT is, or includes, a web page | C.9.3.2.3 |
| 9.3.2.4 | Consistent identification | Where ICT is, or includes, a web page | C.9.3.2.4 |
| 9.3.2.6 | Consistent help | Where ICT is, or includes, a web page | C.9.3.2.6 |
| 9.3.3.1 | Error identification | Where ICT is, or includes, a web page | C.9.3.3.1 |
| 9.3.3.2 | Labels or instructions | Where ICT is, or includes, a web page | C.9.3.3.2 |
| 9.3.3.3 | Error suggestion | Where ICT is, or includes, a web page | C.9.3.3.3 |
| 9.3.3.4 | Error prevention (legal, financial, data) | Where ICT is, or includes, a web page | C.9.3.3.4 |
| 9.3.3.7 | Redundant entry | Where ICT is, or includes, a web page | C.9.3.3.7 |
| 9.3.3.8 | Accessible authentication (minimum) | Where ICT is, or includes, a web page | C.9.3.3.8 |
| 9.4.1.2 | Name, role, value | Where ICT is, or includes, a web page | C.9.4.1.2 |
| 9.4.1.3 | Status messages | Where ICT is, or includes, a web page | C.9.4.1.3 |
| 9.6 | WCAG conformance requirements | Where ICT is, or includes, a web page | C.9.6 |

### A.2.2 Where the ICT is, or includes, a non-web document

Requirements in clause A.2.2 apply to ICT that is, or includes, a [non-web document](#NonWebDocument). If the ICT is not, or does not include a non-web document, then clause A.2.3 should be considered next.

Table A.2: Where ICT is, or includes, a non-web document

| **Clause** | **Requirement** | **Condition** | **Assessment** |
| --- | --- | --- | --- |
| [10.1.1.1](#_10.1.1.1_Non-text_content) | Non-text content | Where ICT is, or includes, a non-web document | [C.10.1.1.1](#_C.10.1.1.1_Non-text_content) |
| 10.1.2.1 | Audio-only and video-only (pre-recorded) | Where ICT is, or includes, a non-web document | C.10.1.2.1 |
| 10.1.2.2 | Captions (pre-recorded) | Where ICT is, or includes, a non-web document | C.10.1.2.2 |
| 10.1.2.3 | Audio description or media alternative (pre-recorded) | Where ICT is, or includes, a non-web document | C.10.1.2.3 |
| 10.1.2.5 | Audio description (pre-recorded) | Where ICT is, or includes, a non-web document | C.10.1.2.5 |
| 10.1.3.1 | Info and relationships | Where ICT is, or includes, a non-web document | C.10.1.3.1 |
| 10.1.3.2 | Meaningful sequence | Where ICT is, or includes, a non-web document | C.10.1.3.2 |
| 10.1.3.3 | Sensory characteristics | Where ICT is, or includes, a non-web document | C.10.1.3.3 |
| 10.1.3.4 | Orientation | Where ICT is, or includes, a non-web document | C.10.1.3.4 |
| 10.1.3.5 | Identify input purpose | Where ICT is, or includes, a non-web document | C.10.1.3.5 |
| 10.1.4.1 | Use of colour | Where ICT is, or includes, a non-web document | C.10.1.4.1 |
| 10.1.4.2 | Audio control | Where ICT is, or includes, a non-web document | C.10.1.4.2 |
| 10.1.4.3 | Contrast (minimum) | Where ICT is, or includes, a non-web document | C.10.1.4.3 |
| 10.1.4.4 | Resize text | Where ICT is, or includes, a non-web document | C.10.1.4.4 |
| 10.1.4.5 | Images of text | Where ICT is, or includes, a non-web document | C.10.1.4.5 |
| 10.1.4.10 | Reflow | Where ICT is, or includes, a non-web document | C.10.1.4.10 |
| 10.1.4.11 | Non-text contrast | Where ICT is, or includes, a non-web document | C.10.1.4.11 |
| 10.1.4.12 | Text spacing | Where ICT is, or includes, a non-web document that does not have a fixed size content layout area that is essential to the information being conveyed | C.10.1.4.12 |
| 10.1.4.13 | Content on hover or focus | Where ICT is, or includes, a non-web document | C.10.1.4.13 |
| 10.2.1.1 | Keyboard | Where ICT is, or includes, a non-web document | C.10.2.1.1 |
| 10.2.1.2 | No keyboard trap | Where ICT is, or includes, a non-web document | C.10.2.1.2 |
| 10.2.1.4 | Character key shortcuts | Where ICT is, or includes, a non-web document | C.10.2.1.4 |
| 10.2.2.1 | Timing adjustable | Where ICT is, or includes, a non-web document | C.10.2.2.1 |
| 10.2.2.2 | Pause, stop, hide | Where ICT is, or includes, a non-web document | C.10.2.2.2 |
| 10.2.3.1 | Three flashes or below threshold | Where ICT is, or includes, a non-web document | C.10.2.3.1 |
| 10.2.4.2 | Document titled | Where ICT is, or includes, a non-web document | C.10.2.4.2 |
| 10.2.4.3 | Focus order | Where ICT is, or includes, a non-web document | C.10.2.4.3 |
| 10.2.4.4 | Link purpose (in context) | Where ICT is, or includes, a non-web document | C.10.2.4.4 |
| 10.2.4.6 | Headings and labels | Where ICT is, or includes, a non-web document | C.10.2.4.6 |
| 10.2.4.7 | Focus visible | Where ICT is, or includes, a non-web document | C.10.2.4.7 |
| 10.2.4.11 | Focus not obscured (minimum) | Where ICT is, or includes, a non-web document | C.10.2.4.11 |
| 10.2.5.1 | Pointer gestures | Where ICT is, or includes, a non-web document | C.10.2.5.1 |
| 10.2.5.2 | Pointer cancellation | Where ICT is, or includes, a non-web document | C.10.2.5.2 |
| 10.2.5.3 | Label in name | Where ICT is, or includes, a non-web document | C.10.2.5.3 |
| 10.2.5.4 | Motion actuation | Where ICT is, or includes, a non-web document | C.10.2.5.4 |
| 10.2.5.7 | Dragging movements | Where ICT is, or includes, a non-web document | C.10.2.5.7 |
| 10.2.5.8 | Target size (minimum) | Where ICT is, or includes, a non-web document | C.10.2.5.8 |
| 10.3.1.1 | Language of document | Where ICT is, or includes, a non-web document | C.10.3.1.1 |
| 10.3.1.2 | Language of parts | Where ICT is, or includes, a non-web document | C.10.3.1.2 |
| 10.3.2.1 | On focus | Where ICT is, or includes, a non-web document | C.10.3.2.1 |
| 10.3.2.2 | On input | Where ICT is, or includes, a non-web document | C.10.3.2.2 |
| 10.3.2.6 | Consistent help | Where ICT is, or includes, a non-web document | C.10.3.2.6 |
| 10.3.3.1 | Error identification | Where ICT is, or includes, a non-web document | C.10.3.3.1 |
| 10.3.3.2 | Labels or instructions | Where ICT is, or includes, a non-web document | C.10.3.3.2 |
| 10.3.3.3 | Error suggestion | Where ICT is, or includes, a non-web document | C.10.3.3.3 |
| 10.3.3.4 | Error prevention (legal, financial, data) | Where ICT is, or includes, a non-web document | C.10.3.3.4 |
| 10.3.3.7 | Redundant entry | Where ICT is, or includes, a non-web document | C.10.3.3.7 |
| 10.3.3.8 | Accessible authentication (minimum) | Where ICT is, or includes, a non-web document | C.10.3.3.8 |
| 10.4.1.2 | Name, role, value | Where ICT is, or includes, a non-web document | C.10.4.1.2 |
| 10.4.1.3 | Status messages | Where ICT is, or includes, a non-web document | C.10.4.1.3 |

A.2.3 Where the ICT is, or includes, non-web software that provides a user interface

Requirements in clause A.2.3 apply to ICT that is, or includes, a [non-web software](#nonWebSoftware) that provides a user interface. If the ICT is not, or does not include a non-web software that provides a user interface, then clause A.2.4 should be considered next.

**Table A.3: Where ICT is, or includes, non-web software that provides a user interface**



| Clause | Requirement | Condition | Assessment |
| --- | --- | --- | --- |
| [11.1.1.1](#_11.1.1.1_Non-text_content) | Non-text content (was 11.1.1.1.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | [C.11.1.1.1](#_C.11.1.1_Text_alternatives) |
| 11.1.2.1 | Audio-only and video-only (pre-recorded) (was 11.1.2.1.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.2.1 |
| 11.1.2.2 | Captions (pre-recorded) | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.2.2 |
| 11.1.2.3 | Audio description or media alternative (pre-recorded) (was 11.1.2.3.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.2.3 |
| 11.1.2.5 | Audio description (pre-recorded) | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.2.5 |
| 11.1.3.1 | Info and relationships (was 11.1.3.1.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.3.1 |
| 11.1.3.2 | Meaningful sequence (was 11.1.3.2.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.3.2 |
| 11.1.3.3 | Sensory characteristics | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.3.3 |
| 11.1.3.4 | Orientation | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.3.4 |
| 11.1.3.5 | Identify input purpose (was 11.1.3.5.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.3.5 |
| 11.1.4.1 | Use of colour | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.1 |
| 11.1.4.2 | Audio control | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.2 |
| 11.1.4.3 | Contrast (minimum) | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.3 |
| 11.1.4.4 | Resize text (was 11.1.4.4.1) | Where ICT is, or includes, non-web software that provides a user interface, and that supports access to enlargement features of the platform or assistive technology | C.11.1.4.4 |
| 11.1.4.5 | Images of text (was 11.1.4.5.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.4.5 |
| 11.1.4.10 | Reflow | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.10 |
| 11.1.4.11 | Non-text contrast | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.11 |
| 11.1.4.12 | Text spacing | Where ICT is, or includes, non-web software that provides a user interface, and and where the content is implemented using markup languages, and where users are allowed to modify text spacing properties | C.11.1.4.12 |
| 11.1.4.13 | Content on hover or focus | Where ICT is, or includes, non-web software that provides a user interface, and any visual presentation of the additional content caused by a hover or focus is not controlled by the user agent or platform software, and is not modified by the author | C.11.1.4.13 |
| 11.2.1.1 | Keyboard (was 11.2.1.1.1) | Where ICT is, or includes, non-web software that provides a user interface, and that provides a keyboard or accepts input from a keyboard or keyboard interface | C.11.2.1.1 |
| 11.2.1.2 | No keyboard trap | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.1.2 |
| 11.2.1.4 | Character key shortcuts (was 11.2.1.4.1) | Where ICT is, or includes, non-web software that provides a user interface, and that provides a keyboard or accepts input from a keyboard or keyboard interface | C.11.2.1.4 |
| 11.2.2.1 | Timing adjustable | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.2.1 |
| 11.2.2.2 | Pause, stop, hide | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.2.2 |
| 11.2.3.1 | Three flashes or below threshold | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.3.1 |
| 11.2.4.3 | Focus order | Where ICT is, or includes, non-web software that provides a user interface, and that provides a keyboard or accepts input from a keyboard or keyboard interface | C.11.2.4.3 |
| 11.2.4.4 | Link purpose (in context) | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.4.4 |
| 11.2.4.6 | Headings and labels | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.4.6 |
| 11.2.4.7 | Focus visible | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.4.7 |
| 11.2.4.11 | Focus not obscured (minimum) | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.4.11 |
| 11.2.5.1 | Pointer gestures | Where ICT is, or includes, non-web software that provides a user interface, and that provides a pointing mechanism or accepts input from pointing devices | C.11.2.5.1 |
| 11.2.5.2 | Pointer cancellation | Where ICT is, or includes, non-web software that provides a user interface, and that provides a pointing mechanism or accepts input from pointing devices | C.11.2.5.2 |
| 11.2.5.3 | Label in name (was 11.2.5.3.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.2.5.3 |
| 11.2.5.4 | Motion actuation | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.5.4 |
| 11.2.5.7 | Dragging movements | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.5.7 |
| 11.2.5.8 | Target size (minimum) | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.5.8 |
| 11.3.1.1 | Language of software (was 11.3.1.1.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.3.1.1 |
| 11.3.2.1 | On focus | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.2.1 |
| 11.3.2.2 | On input | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.2.2 |
| 11.3.2.4 | Consistent identification | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.2.4 |
| 11.3.3.1 | Error identification (was 11.3.3.1.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.3.3.1 |
| 11.3.3.2 | Labels or instructions | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.2 |
| 11.3.3.3 | Error suggestion | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.3 |
| 11.3.3.4 | Error prevention (legal, financial, data) | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.4 |
| 11.3.3.7 | Redundant entry | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.7 |
| 11.3.3.8 | Accessible authentication (minimum) | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.8 |
| 11.4.1.2 | Name, role, value (was 11.4.1.2.1) | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.4.1.2 |
| 11.4.1.3 | Status messages | Where ICT is, or includes, non-web software that provides a user interface | C.11.4.1.3 |
| 11.5.1 | Closed functionality | Where ICT is, or includes, non-web software that provides a user interface, and that software has closed functionality | C.11.5.1 |
| 11.5.2.1 | Platform interoperability with assistive technologies | Where ICT is, or includes, platform software | C.11.5.2.1 |
| 11.5.2.4 | Assistive technology | Where ICT is, or includes, assistive technology | C.11.5.2.4 |
| 11.5.2.5 | Object information | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.5 |
| 11.5.2.6 | Row, column, and headers | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.6 |
| 11.5.2.7 | Values | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.7 |
| 11.5.2.8 | Label relationships | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.8 |
| 11.5.2.9 | Parent-child relationships | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.9 |
| 11.5.2.10 | Text | Where ICT is, or includes, non-web software that provides a user interface, and renders text to a screen | C.11.5.2.10 |
| 11.5.2.11 | List of available actions | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.11 |
| 11.5.2.12 | Execution of available actions | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.12 |
| 11.5.2.13 | Tracking of focus and selection attributes | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.13 |
| 11.5.2.14 | Modification of focus and selection attributes | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.14 |
| 11.5.2.15 | Change notification | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.15 |
| 11.5.2.16 | Modifications of states and properties | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.16 |
| 11.5.2.17 | Modifications of values and text | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.17 |
| 11.6.1 | User control of accessibility features | Where ICT is, or includes, platform software | C.11.6.1 |
| 11.6.2 | No disruption of accessibility features | Where ICT is, or includes, non-web software that provides a user interface | C.11.6.2 |
| 11.7 | User preferences | Where ICT is, or includes, non-web software that provides a user interface, and is not designed to be isolated from its platform | C.11.7 |
| 11.8.1 | Content technology | Where ICT is, or includes, authoring tool functionality | C.11.8.1 |

A.2.4 Where the ICT is, or includes, hardware

Requirements in clause A.2.4 apply to ICT that is, or includes, hardware. If the ICT is not, or does not include hardware, then clause A.2.5 should be considered next.

**Table A.4: Where ICT is, or includes, hardware**

| **Clause** | **Requirement** | **Condition** | **Assessment** |
| --- | --- | --- | --- |
| [8.1.2](#_8.1.2_Standard_connections) | Standard connections | Where ICT is, or includes, hardware, and provides input or output device connection points | [C.8.1.2](#_C.8.1.2_Standard_connections) |
| 8.1.3 | Colour | Where ICT is, or includes, hardware, and colour is used on the hardware to convey information | C.8.1.3 |
| 8.2.1.1 | Speech volume range | Where ICT is, or includes, hardware, and has speech output | C.8.2.1.1 |
| 8.2.1.2 | Incremental volume control | Where ICT is, or includes, hardware, and has speech output, and its volume control is incremental | C.8.2.1.2 |
| 8.2.2.1 | Fixed-line devices | Where ICT is, or includes, hardware, and has speech output, and is a fixed-line communication device that is normally held to the ear | C.8.2.2.1 |
| 8.2.2.2 | Wireless communication devices | Where ICT is, or includes, hardware, and has speech output, and is a wireless communication device that is normally held to the ear | C.8.2.2.2 |
| 8.3.1 | Forward or side reach | Where ICT is, or includes, stationary hardware | C.8.3.1 |
| 8.3.2.1 | Unobstructed forward reach for operable parts | Where ICT is, or includes, stationary hardware, and no part of it obstructs the forward reach | C.8.3.2.1 |
| 8.3.2.2 | Forward reach display location | Where ICT is, or includes, stationary hardware | C.8.3.2.2 |
| 8.3.2.3.1 | Clear space underneath an obstruction | Where ICT is, or includes, stationary hardware, and has an obstruction that is an integral part of the ICT, and the obstruction hinders the access to any type of operable part | C.8.3.2.3.1 |
| 8.3.2.3.2 | Obstructed forward reach range | Where ICT is, or includes, stationary hardware, and has an obstruction that is an integral part of the ICT, and the obstruction is less than 400 mm | C.8.3.2.3.2 |
| 8.3.3.1 | Unobstructed high and low side reach | Where ICT is, or includes, stationary hardware, and the side reach is unobstructed or obstructed by an element that is an integral part of the ICT | C.8.3.3.1 |
| 8.3.3.2 | Obstructed side reach | Where ICT is, or includes, stationary hardware, and has an obstruction that is an integral part of the ICT | C.8.3.3.2 |
| 8.3.4 | Knee and toe clearance | Where ICT is, or includes, stationary hardware, and has an obstacle that is an integral part of the ICT, and the space under the obstacle is part of access space | C.8.3.4 |
| 8.3.5.1 | Change in level | Where ICT is, or includes, stationary hardware, and has a floor within it | C.8.3.5.1 |
| 8.3.5.2 | Clear floor or ground space | Where ICT is, or includes, stationary hardware, and has an operating area within it | C.8.3.5.2 |
| 8.3.5.3.1 | General | Where ICT is, or includes, stationary hardware, and has an access space within it | C.8.3.5.3.1 |
| 8.3.5.3.2 | Forward approach | Where ICT is, or includes, stationary hardware, and has an operating area that is inside a space bounded on 3 sides within the ICT, and the space is deeper than 250 mm, and where a forward approach is necessary | C.8.3.5.3.2 |
| 8.3.5.3.3 | Parallel approach | Where ICT is, or includes, stationary hardware, and has an operating area that is inside a space bounded on 3 sides within the ICT, and the space is deeper than 250 mm, and where a parallel approach is possible | C.8.3.5.3.3 |
| 8.3.6 | Legibility | Where ICT is, or includes, stationary hardware, and provides one or more display screens | C.8.3.6 |
| 8.3.7 | Installation instructions | Where ICT is, or includes, stationary hardware | C.8.3.7 |
| 8.4.1 | Numeric keys | Where ICT is, or includes, hardware, and has physical numeric keys arranged in a rectangular keypad layout | C.8.4.1 |
| 8.4.2.1 | Mechanical operable parts discernability | Where ICT is, or includes, hardware, and has mechanical operable parts | C.8.4.2.1 |
| 8.4.2.2 | Force of operation of mechanical parts | Where ICT is, or includes, hardware, and has a control that requires a force greater than 22,2 N to operate it | C.8.4.2.2 |
| 8.4.3 | Keys, tickets and fare cards | Where ICT is, or includes, hardware, and has keys, tickets or fare cards, and their orientation is important for further use | C.8.4.3 |
| 8.5 | Tactile indication of speech mode | Where ICT is, or includes, hardware, and is designed for shared use, and speech output is available | C.8.5 |

A.2.5 All ICT

Requirements in clause A.2.5 apply to all ICT and is the last table that needs to be considered.

**Table A.5: All ICT**

| **Clause** | **Requirement** | **Condition** | **Assessment** |
| --- | --- | --- | --- |
| [5.1.2.1](#_5.1.2.1_Closed_functionality) | Closed functionality | Where ICT includes closed functionality | [C.5.1.2.1](#_C.5.1.2.1_Closed_functionality) |
| 5.1.2.2 | Assistive technology and closed functionality | Where ICT includes closed functionality | C.5.1.2.2 |
| 5.1.3.1 | Audio output of visual information | Where ICT includes closed functionality, and visual information is needed to enable the use of the closed functionality of the ICT | C.5.1.3.1 |
| 5.1.3.2 | Auditory output delivery including speech | Where ICT includes closed functionality, and auditory output is provided as non-visual access to closed functionality | C.5.1.3.2 |
| 5.1.3.4 | Speech output user control | Where ICT includes closed functionality, and speech output is provided as non-visual access to closed functionality | C.5.1.3.4 |
| 5.1.3.5 | Speech output automatic interruption | Where ICT includes closed functionality, and speech output is provided as non-visual access to closed functionality | C.5.1.3.5 |
| 5.1.3.6 | Speech output for non-text content | Where ICT includes closed functionality, and presents non-text content | C.5.1.3.6 |
| 5.1.3.7 | Speech output for video information | Where ICT includes closed functionality, and pre-recorded video content is needed to enable the use of closed functionality of the ICT, and speech output is provided as non-visual access to closed functionality | C.5.1.3.7 |
| 5.1.3.8 | Masked entry | Where ICT includes closed functionality, and auditory output is provided as non-visual access to closed functionality, and the characters displayed are masking characters | C.5.1.3.8 |
| 5.1.3.9 | Private access to personal data | Where ICT includes closed functionality, and auditory output is provided as non-visual access to closed functionality, and the output contains data that is considered to be private according to the applicable privacy policy | C.5.1.3.9 |
| 5.1.3.10 | Non-interfering audio output | Where ICT includes closed functionality, and auditory output is provided as non-visual access to closed functionality | C.5.1.3.10 |
| 5.1.3.11 | Private listening volume | Where ICT includes closed functionality, and auditory output is provided as non-visual access to closed functionality, and the auditory output is delivered through a mechanism for private listening | C.5.1.3.11 |
| 5.1.3.12 | Speaker volume | Where ICT includes closed functionality, and auditory output is provided as non-visual access to closed functionality, and is delivered through speakers on the ICT | C.5.1.3.12 |
| 5.1.3.13 | Volume reset | Where ICT includes closed functionality, and auditory output is provided as non-visual access to closed functionality | C.5.1.3.13 |
| 5.1.3.14 | Spoken languages | Where ICT includes closed functionality, and speech output is provided as non-visual access to closed functionality | C.5.1.3.14 |
| 5.1.3.15 | Non-visual error identification | Where ICT includes closed functionality, and speech output is provided as non-visual access to closed functionality, and an input error is automatically detected | C.5.1.3.15 |
| 5.1.3.16 | Receipts, tickets, and transactional outputs | Where ICT includes closed functionality, and provides receipts, tickets or other outputs as a result of a self-service transaction | C.5.1.3.16 |
| 5.1.4 | Functionality closed to text enlargement | Where ICT includes closed functionality, and any functionality of the ICT is closed to the text enlargement features of platform or assistive technology | C.5.1.4 |
| 5.1.5 | Visual output for auditory information | Where ICT includes closed functionality, and auditory information is needed to enable the use of closed functionality of the ICT | C.5.1.5 |
| 5.1.6.1 | Closed functionality | Where ICT includes closed functionality, and the functionality is closed to keyboards or keyboard interfaces | C.5.1.6.1 |
| 5.1.6.2 | Input focus | Where ICT includes closed functionality, and the functionality is closed to keyboards or keyboard interfaces, and where input focus can be moved to a user interface element | C.5.1.6.2 |
| 5.1.7 | Access without speech | Where ICT includes closed functionality, and speech is needed to operate closed functionality of the ICT | C.5.1.7 |
| 5.1.8 | Identify input purpose (closed functionality) (was 11.1.3.5.2) | Where ICT includes closed functionality | C.5.1.8 |
| 5.2 | Activation of accessibility features | Where ICT includes documented accessibility features | C.5.2 |
| 5.3 | Biometrics | Where ICT uses biological characteristics | C.5.3 |
| 5.4 | Preservation of accessibility information during conversion | Where ICT converts information or communication | C.5.4 |
| 5.5.1 | Means of operation | Where ICT includes operable parts that require grasping, pinching, or twisting of the wrist to operate | C.5.5.1 |
| 5.5.2 | Operable parts discernibility | Where ICT includes operable parts | C.5.5.2 |
| 5.6.1 | Tactile or auditory status | Where ICT includes a locking or toggle control | C.5.6.1 |
| 5.6.2 | Visual status | Where ICT includes a locking or toggle control | C.5.6.2 |
| 5.7 | Key repeat | Where ICT includes a key repeat function that cannot be turned off, and that key repeat will result in the generation of multiple entries of the same alphanumeric data into input fields or into documents: | C.5.7 |
| 5.8 | Double-strike key acceptance | Where ICT includes a keyboard or keypad | C.5.8 |
| 5.9 | Simultaneous user actions | Where ICT includes a mode of operation requiring simultaneous user actions for its operation | C.5.9 |
| 6.0.2 | Communication client | Where ICT is, or includes, a communication client that supports continuous bidirectional voice communication with or within a communication system that supports continuous bidirectional voice communication | C.6.0.2 |
| 6.0.3 | Communication system | Where ICT is, or includes, or is a part of, a communication system that supports continuous bidirectional voice communication with communication clients of the system | C.6.0.3 |
| 6.0.4 | Communication system that connects to another communication system | Where ICT is, or includes, a communication system that supports continuous bidirectional voice communication with one or more other communication systems that support continuous bidirectional voice communication | C.6.0.4 |
| 6.0.5 | Communication system when a communication client is in roaming mode | Where ICT is, or includes, a communication system that supports continuous bidirectional voice communication, and a communication client that supports continuous bidirectional voice communication with another compatible communication system, visits and connects to the communication system | C.6.0.5 |
| 6.0.6 | Communication client in emergency communications | Where ICT is required to provide, or otherwise provides, emergency communications, and is, or includes, a communication client that supports continuous bidirectional voice communication with or within a communication system that supports continuous bidirectional voice emergency communication | C.6.0.6 |
| 6.0.7 | Communication system that conveys emergency communications | Where ICT is, or includes, a communication system that supports continuous bidirectional voice communication in emergency communications with PSAPs | C.6.0.7 |
| 6.0.8 | Communication system that conveys emergency communications when a visiting client is in roaming mode. | Where ICT is, or includes, a communication system that supports continuous bidirectional voice communication in emergency communications with PSAPs, and a communication client that supports continuous bidirectional voice communication with another compatible communication system, visits and connects to the communication system | C.6.0.8 |
| 6.0.9 | Communication system that conveys emergency communications with communications client visiting other country | Where ICT is, or includes, a communication system that supports continuous bidirectional voice communication in emergency communications with PSAPs, and a communication client of the ICT that supports continuous bidirectional voice communication, visits another country than the home country | C.6.0.9 |
| 6.1 | Audio bandwidth for voice communication | Where ICT provides continuous bidirectional voice communication | C.6.1 |
| 6.2.1.1 | RTT functionality | Where ICT provides functionality that allows continuous bidirectional voice communication, and would not require design changes to add input or output hardware to the ICT | C.6.2.1.1 |
| 6.2.1.2 | Concurrent voice and RTT | Where ICT provides continuous bidirectional voice communication, and supports RTT | C.6.2.1.2 |
| 6.2.1.3 | Single user operations | Where ICT provides continuous bidirectional voice communication, and supports RTT | C.6.2.1.3 |
| 6.2.2.1 | Distinguishable display | Where ICT supports continuous bidirectional voice communication, and includes RTT presentation capabilities | C.6.2.2.1 |
| 6.2.2.2 | Active communicator indication | Where ICT supports continuous bidirectional voice communication, and includes RTT send and receive capabilities, and provides speaker indication for voice | C.6.2.2.2 |
| 6.2.2.3 | Indication of audio with RTT | Where ICT provides continuous bidirectional voice communication, and supports RTT | C.6.2.2.4 |
| 6.2.2.4 | Presentation of relative time order of text | Where ICT supports continuous bidirectional voice communication, and includes RTT presentation capabilities | C.6.2.2.4 |
| 6.2.2.5 | Review of RTT communication contents | Where ICT supports continuous bidirectional voice communication, and includes RTT presentation capabilities | C.6.2.2.5 |
| 6.2.3 | DTMF touch-tone generation during RTT operations | Where ICT is, or includes, a communication client, and provides functionality that allows continuous bidirectional voice communication, and supports the generation and transmission of touch-tone signals on voice calls | C.6.2.3 |
| 6.2.4 | RTT responsiveness | Where ICT is, or includes, a communication client, and supports continuous bidirectional voice communication, and supports RTT | C.6.2.4 |
| 6.2.5 | Adding and erasing of RTT input | Where ICT supports continuous bidirectional voice communication, and includes RTT capabilities, and supports RTT user input | C.6.2.5 |
| 6.2.6 | Processing rate of RTT | Where ICT supports continuous bidirectional voice communication, and includes RTT capabilities | C.6.2.6 |
| 6.2.7 | Character representation | Where ICT supports continuous bidirectional voice communication, and includes RTT capabilities | C.6.2.7 |
| 6.2.8 | RTT input methods | Where ICT is, or includes, a communication client, and supports continuous bidirectional voice communication, and supports RTT | C.6.2.8 |
| 6.2.9 | RTT activation | Where ICT supports continuous bidirectional voice communication, and includes RTT capabilities | C.6.2.9 |
| 6.2.10 | RTT interoperability | Where ICT provides functionality that allows continuous bidirectional voice communication, and connects to another provider’s ICT that allows continuous bidirectional voice communication | C.6.2.10 |
| 6.3 | Caller ID | Where ICT provides caller identification or other identification functions | C.6.3 |
| 6.4 | Alternatives to voice-based services | Where ICT provides voice mail, auto-attendant, or interactive voice response facilities | C.6.4 |
| 6.5.2 | Resolution | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.2 a |
| 6.5.3 | Frame rate | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.3 a |
| 6.5.4 | Synchronization between audio and video | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.4 |
| 6.5.5 | Visual indicator of audio with video | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.5 |
| 6.5.6 | Speaker identification with video (sign language) communication | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication, and provides speaker identification for voice users | C.6.5.6 |
| 6.7 | Total conversation provision | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video functionality | C.6.7 |
| 7.1.1 | Captioning playback | Where ICT displays video with synchronized audio | C.7.1.1 |
| 7.1.2 | Captioning synchronization | Where ICT displays video with synchronized audio, and displays captions | C.7.1.2 |
| 7.1.3 | Preservation of captioning | Where ICT transmits, converts, or records video with synchronized audio | C.7.1.3 |
| 7.1.4 | Captions characteristics | Where ICT displays video with synchronized audio, and displays captions | C.7.1.4 |
| 7.1.5 | Spoken interlingual subtitles | Where ICT displays video with synchronized audio, and provides interlingual subtitles | C.7.1.5 |
| 7.2.1 | Audio description playback | Where ICT displays video with synchronized audio | C.7.2.1 |
| 7.2.2 | Audio description synchronization | Where ICT displays video with synchronized audio, and has a mechanism to play audio description | C.7.2.2 |
| 7.2.3 | Preservation of audio description | Where ICT transmits, converts, or records video with synchronized audio | C.7.2.3 |
| 7.3 | User controls for captions and audio description | Where ICT displays video with synchronized audio, and has control over the presentation of subtitles and audio description | C.7.3 |
| 11.8.2 | Accessible content creation | Where ICT is, or includes, authoring tool functionality | C.11.8.2 |
| 11.8.3 | Preservation of accessibility information in transformations | Where ICT is, or includes, authoring tool functionality, and provides restructuring transformations or re-coding transformations | C.11.8.3 |
| 11.8.4 | Repair assistance | Where ICT is, or includes, authoring tool functionality, and can detect that content does not meet a requirement of clauses 9 (Web) or 10 (Non-web documents) as applicable | C.11.8.4 |
| 11.8.5 | Templates | Where ICT is, or includes, authoring tool functionality, and provides templates | C.11.8.5 |
| 12.1.1 | Accessibility and compatibility features | Where ICT includes product documentation, whether provided separately or integrated within the ICT | C.12.1.1 |
| 12.1.2 | Accessible documentation | Where ICT is, or includes, product documentation | C.12.1.2 |
| 12.2.2 | Information on accessibility and compatibility features | Where ICT is, or includes, support services | C.12.2.2 |
| 12.2.3 | Effective communication | Where ICT is, or includes, support services | C.12.2.3 |
| 12.2.4 | Accessible documentation | Where ICT is, or includes, support services, and the support services provide documentation | C.12.2.4 |
| 13.1.2.2 | Assignment of the user identifier for the primary users of relay services | Where ICT is, or includes, a relay service invocation system | C.13.1.2.2 |
| 13.1.2.3 | Conveying of caller identifier in relayed communications for primary relay users | Where ICT is, or includes, a relay service invocation system | C.13.1.2.3 |
| 13.1.2.4 | Relay service invocation decision in outgoing communications | Where ICT is, or includes, a relay service invocation system | C.13.1.2.4 |
| 13.1.2.5 | Relay service invocation decision in incoming communications | Where ICT is, or includes, a relay service invocation system | C.13.1.2.5 |
| 13.1.2.6 | Relay service support requested by the primary user for emergency communications | Where ICT is, or includes, a relay service invocation system | C.13.1.2.6 |
| 13.1.3.1 | Relaying action in relay service communication | Where ICT is, or includes, a relay service | C.13.1.3.1 |
| 13.1.3.2 | Media handling in relay service communication | Where ICT is, or includes, a relay service | C.13.1.3.2 |
| 13.1.3.3 | Relay service support in ICT based conferences | Where ICT is, or includes, a relay service | C.13.1.3.3 |
| 13.1.3.4 | Relay service support during emergency communications initiated by the PSAP | Where ICT is, or includes, a relay service | C.13.1.3.4 |

# Annex B (informative): Relationship between requirements and functional performance statements

## B.1 Relationships between clauses 5 to 13 and the functional performance statements

Table B.2 shows which of the requirements set out in clauses 5 to 13 support each of the functional performance statements set out in clause 4.2.

To allow Table B.2 to fit the page, the abbreviations shown in Table B.1 have been used in the column headers of Table B.2.

Table B.1: Key to the column header designations used in Table B.2

|  |  |  |
| --- | --- | --- |
| Column header abbreviation | Functional performance statement | Clause number |
| WV | Usage without vision | [4.2.1](#_4.2.1_Usage_without) |
| LV | Usage with limited vision | [4.2.2](#_4.2.2_Usage_with) |
| WPC | Usage without perception of colour | [4.2.3](#_4.2.3_Usage_without) |
| WH | Usage without hearing | [4.2.4](#_4.2.4_Usage_without) |
| LH | Usage with limited hearing | [4.2.5](#_4.2.5_Usage_with) |
| WVC | Usage without vocal capability | [4.2.6](#_4.2.6_Usage_with) |
| LMS | Usage with limited manipulation or strength | [4.2.7](#_4.2.7_Usage_with) |
| LR | Usage with limited reach | [4.2.8](#_4.2.8_Usage_with) |
| PST | Minimize photosensitive seizure triggers | [4.2.9](#_4.2.9_Minimize_photosensitive) |
| LC | Usage with limited cognition | [4.2.10](#_4.2.10_Usage_with) |
| DB | Usage with limited hearing and vision | [4.2.11](#_4.2.11_Usage_without) |
| PR | Privacy | [4.2.12](#_4.2.12_Privacy) |

The following abbreviations have been used to represent the relationship between the requirements in clauses 5 to 13 and the functional performance statements:

* P = Primary relationship. The requirement supports the functional performance statement.
* S = Secondary relationship. The requirement provides partial support for the functional performance statement because some users may use the feature in specific situations.

Table B.2: Requirements in clauses 5 to 13 supporting the accessibility needs  
expressed in the functional performance statements

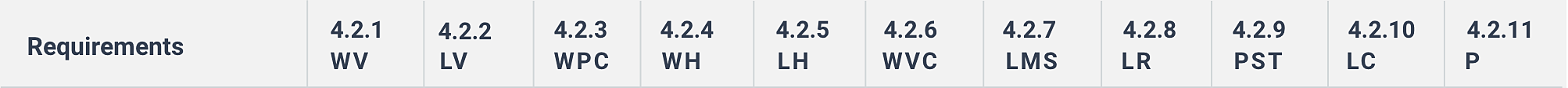
| Clause | Requirement | WV | LV | WPC | WH | LH | WVC | LMS | LR | PST | LC | DB | PR |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [5.1.2.1](#_5.1.2.1_Closed_functionality) | Closed functionality | P | P | P | P | P | S | P | S | S | P | P | S |
| 5.1.2.2 | Assistive technology and closed functionality | P | P | P | P | P | S | P | S | S | P | P | S |
| 5.1.3.1 | Audio output of visual information | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.2 | Auditory output delivery including speech | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.3 | Auditory output correlation (recommendation) | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.4 | Speech output user control | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.5 | Speech output automatic interruption | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.6 | Speech output for non-text content | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.7 | Speech output for video information | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.8 | Masked entry | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.9 | Private access to personal data | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.10 | Non-interfering audio output | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.11 | Private listening volume | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.12 | Speaker volume | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.13 | Volume reset | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.14 | Spoken languages | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.15 | Non-visual error identification | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.3.16 | Receipts, tickets, and transactional outputs | P | P | S | - | - | - | - | - | - | P | S | - |
| 5.1.4 | Functionality closed to text enlargement | - | P | S | - | - | - | - | - | - | S | S | - |
| 5.1.5 | Visual output for auditory information | - | - | - | P | P | - | - | - | - | S | S | - |
| 5.1.6.1 | Closed functionality | P | P | - | - | - | S | P | - | - | - | S | - |
| 5.1.6.2 | Input focus | P | P | - | - | - | S | P | - | - | - | S | - |
| 5.1.7 | Access without speech | - | - | - | S | S | P | - | - | - | - | S | - |
| 5.1.8 | Identify input purpose (closed functionality) (was 11.1.3.5.2) | P | P | - | - | - | - | - | - | - | P | S | - |
| 5.2 | Activation of accessibility features | P | P | P | P | P | P | P | P | P | P | P | P |
| 5.3 | Biometrics | P | P | - | - | - | P | P | P | - | - | S | - |
| 5.4 | Preservation of accessibility information during conversion | P | P | - | P | P | - | - | - | - | S | P | - |
| 5.5.1 | Means of operation | - | - | - | - | - | - | P | - | - | - | S | - |
| 5.5.2 | Operable parts discernibility | P | S | - | - | - | - | - | - | - | - | S | - |
| 5.6.1 | Tactile or auditory status | P | P | - | - | - | - | - | - | - | S | S | - |
| 5.6.2 | Visual status | - | - | - | P | P | - | S | S | - | S | S | - |
| 5.7 | Key repeat | - | - | - | - | - | - | P | - | - | S | S | - |
| 5.8 | Double-strike key acceptance | - | - | - | - | - | - | P | P | - | S | S | - |
| 5.9 | Simultaneous user actions | S | S | - | - | - | - | P | P | - | S | S | - |
| 6.0.2 | Communication client |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.0.3 | Communication system |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.0.4 | Communication system that connects to another communication system |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.0.5 | Communication system when a communication client is in roaming mode |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.0.6 | Communication client in emergency communications |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.0.7 | Communication system that conveys emergency communications |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.0.8 | Communication system that conveys emergency communications when a visiting client is in roaming mode. |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.0.9 | Communication system that conveys emergency communications with communications client visiting other country |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.1 | Audio bandwidth for voice communication | - | - | - | P | P | P | - | - | - | S | S | - |
| 6.2.1.1 | RTT functionality |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.1.2 | Concurrent voice and RTT |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.1.3 | Single user operations |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.2.1 | Distinguishable display |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.2.2 | Active communicator indication |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.2.3 | Indication of audio with RTT |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.2.4 | Presentation of relative time order of text |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.2.5 | Review of RTT communication contents |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.3 | DTMF touch-tone generation during RTT operations |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.4 | RTT responsiveness |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.5 | Adding and erasing of RTT input |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.6 | Processing rate of RTT |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.7 | Character representation |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.8 | RTT input methods |  |  |  | P | P | P | P |  |  | S | S |  |
| 6.2.9 | RTT activation |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.2.10 | RTT interoperability |  |  |  | P | P | P |  |  |  |  | S |  |
| 6.3 | Caller ID | P | P | - | - | - | - | - | - | - | S | S | - |
| 6.4 | Alternatives to voice-based services | - | - | - | P | P | P | - | - | - | - | S | - |
| 6.5.2 | Resolution | - | - | - | P | P | S | - | - | - | - | S | - |
| 6.5.3 | Frame rate | - | - | - | P | P | S | - | - | - | - | S | - |
| 6.5.4 | Synchronization between audio and video | - | - | - | P | P | S | - | - | - | - | S | - |
| 6.5.5 | Visual indicator of audio with video | - | - | - | P | P | S | - | - | - | - | S | - |
| 6.5.6 | Speaker identification with video (sign language) communication | - | - | - | P | P | S | - | - | - | - | S | - |
| 6.6 | Alternatives to video-based services (recommendation) | P | S | - | P | P | P | - | - | - | - | P | - |
| 6.7 | Total conversation provision | P | p |  | P | P | P |  |  |  | s | P |  |
| 7.1.1 | Captioning playback | - | - | - | P | P | - | - | - | - | S | S | - |
| 7.1.2 | Captioning synchronization | - | - | - | P | P | - | - | - | - | S | S | - |
| 7.1.3 | Preservation of captioning | - | - | - | P | P | - | - | - | - | S | S | - |
| 7.1.4 | Captions characteristics | - | S | S | P | P | - | - | - | - | S | S | - |
| 7.1.5 | Spoken interlingual subtitles | P | P | S | - | - | - | - | - | - | S | S | - |
| 7.2.1 | Audio description playback | P | P | - | - | - | - | - | - | - | S | S | - |
| 7.2.2 | Audio description synchronization | P | P | - | - | - | - | - | - | - | S | S | - |
| 7.2.3 | Preservation of audio description | P | P | - | - | - | - | - | - | - | S | S | - |
| 7.3 | User controls for captions and audio description | P | P | - | P | P | - | - | - | - | S | P | - |
| 8.1.2 | Standard connections | P | P | - | - | P | - | P | P | - | P | P | - |
| 8.1.3 | Colour | - | S | P | - | - | - | - | - | - | S | S | - |
| 8.2.1.1 | Speech volume range | - | - | - | - | P | - | - | - | - | - | S | - |
| 8.2.1.2 | Incremental volume control | - | - | - | - | P | - | - | - | - | - | S | - |
| 8.2.2.1 | Fixed-line devices | - | - | - | - | P | - | - | - | - | - | S | - |
| 8.2.2.2 | Wireless communication devices | - | - | - | - | P | - | - | - | - | - | S | - |
| 8.3.1 | Forward or side reach | - | - | - | - | - | - | - | P | - | - | S | - |
| 8.3.2.1 | Unobstructed forward reach for operable parts | - | - | - | - | - | - | - | P | - | - | S | - |
| 8.3.2.2 | Forward reach display location | - | - | - | - | - | - | - | P | - | - | S | - |
| 8.3.2.3.1 | Clear space underneath an obstruction | - | - | - | - | - | - | - | P | - | - | S | - |
| 8.3.2.3.2 | Obstructed forward reach range | - | - | - | - | - | - | - | P | - | - | S | - |
| 8.3.3.1 | Unobstructed high and low side reach | - | - | - | - | - | - | - | P | - | - | S | - |
| 8.3.3.2 | Obstructed side reach | - | - | - | - | - | - | - | P | - | - | S | - |
| 8.3.4 | Knee and toe clearance |  |  |  |  |  |  |  | P |  |  |  |  |
| 8.3.5.1 | Change in level |  |  |  |  |  |  |  | P |  |  |  |  |
| 8.3.5.2 | Clear floor or ground space |  |  |  |  |  |  |  | P |  |  |  |  |
| 8.3.5.3.1 | General |  |  |  |  |  |  |  | P |  |  |  |  |
| 8.3.5.3.2 | Forward approach |  |  |  |  |  |  |  | P |  |  |  |  |
| 8.3.5.3.3 | Parallel approach |  |  |  |  |  |  |  | P |  |  |  |  |
| 8.3.6 | Legibility | - | S | - | - | - | - | - | P | - | - | S | - |
| 8.3.7 | Installation instructions |  |  |  |  |  |  |  | P |  |  |  |  |
| 8.4.1 | Numeric keys | P | S | - | - | - | - | - | P | - | - | S | - |
| 8.4.2.1 | Mechanical operable parts discernability | - | - | - | - | - | - | P | S | - | - | S | - |
| 8.4.2.2 | Force of operation of mechanical parts | - | - | - | - | - | - | P | S | - | - | S | - |
| 8.4.3 | Keys, tickets and fare cards | P | S | - | - | - | - | - | - | - | - | S | - |
| 8.5 | Tactile indication of speech mode | P | S | - | - | - | - | - | - | - | S | S | - |
| 9.1.1.1 | Non-text content | P | P | - | P | S | - | - | - | - | S | P | S |
| 9.1.2.1 | Audio-only and video-only (pre-recorded) | P | P | - | P | P | - | - | - | - | S | P | - |
| 9.1.2.2 | Captions (pre-recorded) | - | - | - | P | P | - | - | - | - | S | S | - |
| 9.1.2.3 | Audio description or media alternative (pre-recorded) | P | S | - | - | - | - | - | - | - | S | S | - |
| 9.1.2.4 | Captions (live) | - | - | - | P | P | - | - | - | - | S | S | - |
| 9.1.2.5 | Audio description (pre-recorded) | P | S | - | - | - | - | - | - | - | S | S | - |
| 9.1.3.1 | Info and relationships | P | S | - | - | - | - | - | - | - | S | S | - |
| 9.1.3.2 | Meaningful sequence | P | S | - | - | - | - | - | - | - | S | S | - |
| 9.1.3.3 | Sensory characteristics | P | P | P | P | P | - | - | - | - | S | P | - |
| 9.1.3.4 | Orientation | - | - | - | - | - | - | P | P | - | S | S | - |
| 9.1.3.5 | Identify input purpose | - | P | - | - | - | - | - | - | - | - | S | - |
| 9.1.4.1 | Use of colour | P | P | P | - | - | - | - | - | - | S | S | - |
| 9.1.4.2 | Audio control | P | - | - | - | P | - | - | - | - | S | P | - |
| 9.1.4.3 | Contrast (minimum) | - | P | P | - | - | - | - | - | - | S | S | - |
| 9.1.4.4 | Resize text | - | P | - | - | - | - | - | - | - | - | S | - |
| 9.1.4.5 | Images of text | - | P | P | - | - | - | - | - | - | S | S | - |
| 9.1.4.10 | Reflow | - | P | - | - | - | - | - | - | - | - | S | - |
| 9.1.4.11 | Non-text contrast | - | P | P | - |  | - | - | - | - | S | S | - |
| 9.1.4.12 | Text spacing | - | P | - | - | - | - | - | - | - | P | S | - |
| 9.1.4.13 | Content on hover or focus | - | P | - | - | - | - | P | - | - | P | S | - |
| 9.2.1.1 | Keyboard | P | P | - | - | - | - | P | - | - | - | S | - |
| 9.2.1.2 | No keyboard trap | P | P | - | - | - | - | P | - | - | - | S | - |
| 9.2.1.4 | Character key shortcuts | - | - | - | - | - | - | P | P | - | S | S | - |
| 9.2.2.1 | Timing adjustable | P | P | - | P | P | - | P | - | - | P | P | - |
| 9.2.2.2 | Pause, stop, hide | P | P | - | P | P | - | P | - | - | P | P | - |
| 9.2.3.1 | Three flashes or below threshold | - | - | - | - | - | - | - | - | - | - | S | P |
| 9.2.4.1 | Bypass blocks | P | P | - | - | - | - | P | - | - | P | S | - |
| 9.2.4.2 | Page titled | P | P | - | - | - | - | - | - | - | P | S | - |
| 9.2.4.3 | Focus order | P | P | - | - | - | - | P | - | - | P | S | - |
| 9.2.4.4 | Link purpose (in context) | P | P | - | - | - | S | P | - | - | P | S | - |
| 9.2.4.5 | Multiple ways | P | P | - | - | - | S | P | - | - | P | S | - |
| 9.2.4.6 | Headings and labels | P | P | - | S | - | S | P | - | - | P | S | - |
| 9.2.4.7 | Focus visible | - | P | - | - | - | S | P | - | - | P | S | - |
| 9.2.4.11 | Focus not obscured (minimum) | P | P | - | - | - | S | P | - | - | P | S | - |
| 9.2.5.1 | Pointer gestures | P | S | - | - | - | - | P | P | - | P | S | - |
| 9.2.5.2 | Pointer cancellation | P | P | - | - | - | - | P | P | - | P | S | - |
| 9.2.5.3 | Label in name | P | P | - | - | - | - | P | P | - | S | S | - |
| 9.2.5.4 | Motion actuation | S | S | - | - | - | - | P | P | - | S | S | - |
| 9.2.5.7 | Dragging movements | P | P |  |  |  |  | P | P |  | S | S |  |
| 9.2.5.8 | Target size (minimum) |  | P |  |  |  |  | P | P |  | S | S |  |
| 9.3.1.1 | Language of page | P | S | - | S | S | - | - | - | - | P | S | - |
| 9.3.1.2 | Language of parts | P | P | - | S | S | - | - | - | - | S | S | - |
| 9.3.2.1 | On focus | P | P | - | - | - | - | P | - | - | P | S | - |
| 9.3.2.2 | On input | P | P | - | - | - | - | P | - | - | P | S | - |
| 9.3.2.3 | Consistent navigation | P | P | - | - | - | - | - | - | - | P | S | - |
| 9.3.2.4 | Consistent identification | S | P | - | - | - | - | S | - | - | P | S | - |
| 9.3.2.6 | Consistent help | P | P | - | - | - |  | S | - | - | P | S |  |
| 9.3.3.1 | Error identification | S | S | S | S | S | S | S | S | S | P | S | - |
| 9.3.3.2 | Labels or instructions | P | P | - | - | - | S | S | - | - | P | S | - |
| 9.3.3.3 | Error suggestion | S | S | S | S | S | S | S | S | S | P | S | - |
| 9.3.3.4 | Error prevention (legal, financial, data) | P | P | - | - | - | - | S | - | - | P | S | - |
| 9.3.3.7 | Redundant entry | S | S |  |  |  |  | P | S |  | P | S |  |
| 9.3.3.8 | Accessible authentication (minimum) | P | P | P | P | P | P | P | P | P | P | P |  |
| 9.4.1.2 | Name, role, value | P | P | S | S | S | - | P | S | S | P | S | - |
| 9.4.1.3 | Status messages | P | P | - | - | - | S | P | - | - | P | S | - |
| 9.6 | WCAG conformance requirements | P | P | P | P | P | S | P | P | P | P | P | S |
| 10.1.1.1 | Non-text content | P | P | - | P | S | - | - | - | - | S | P | S |
| 10.1.2.1 | Audio-only and video-only (pre-recorded) | P | P | - | P | P | - | - | - | - | S | P | - |
| 10.1.2.2 | Captions (pre-recorded) | - | - | - | P | P | - | - | - | - | S | S | - |
| 10.1.2.3 | Audio description or media alternative (pre-recorded) | P | S | - | - | - | - | - | - | - | S | S | - |
| 10.1.2.4 | Captions (live) | - | - | - | P | P | - | - | - | - | S | S | - |
| 10.1.2.5 | Audio description (pre-recorded) | P | S | - | - | - | - | - | - | - | S | S | - |
| 10.1.3.1 | Info and relationships | P | S | - | - | - | - | - | - | - | S | S | - |
| 10.1.3.2 | Meaningful sequence | P | S | - | - | - | - | - | - | - | S | S | - |
| 10.1.3.3 | Sensory characteristics | P | P | P | P | P | - | - | - | - | S | P | - |
| 10.1.3.4 | Orientation | - | - | - | - | - | - | P | P | - | S | S | - |
| 10.1.3.5 | Identify input purpose | - | P | - | - | - | - | - | - | - | - | S | - |
| 10.1.4.1 | Use of colour | P | P | P | - | - | - | - | - | - | S | S | - |
| 10.1.4.2 | Audio control | P | - | - | - | P | - | - | - | - | S | P | - |
| 10.1.4.3 | Contrast (minimum) | - | P | P | - | - | - | - | - | - | S | S | - |
| 10.1.4.4 | Resize text | - | P | - | - | - | - | - | - | - | - | S | - |
| 10.1.4.5 | Images of text | - | P | P | - | - | - | - | - | - | S | S | - |
| 10.1.4.10 | Reflow | - | P | - | - | - | - | - | - | - | - | S | - |
| 10.1.4.11 | Non-text contrast | - | P | P | - |  | - | - | - | - | S | S | - |
| 10.1.4.12 | Text spacing | - | P | - | - | - | - | - | - | - | P | S | - |
| 10.1.4.13 | Content on hover or focus | - | P | - | - | - | - | - | - | - | P | S | - |
| 10.2.1.1 | Keyboard | P | P | - | - | - | S | P | - | - | - | S | - |
| 10.2.1.2 | No keyboard trap | P | P | - | - | - | S | P | - | - | - | S | - |
| 10.2.1.4 | Character key shortcuts | - | - | - | - | - | - | P | P | - | S | S | - |
| 10.2.2.1 | Timing adjustable | P | P | - | P | P | - | P | - | - | P | P | - |
| 10.2.2.2 | Pause, stop, hide | P | P | - | P | P | - | P | - | - | P | P | - |
| 10.2.3.1 | Three flashes or below threshold | - | - | - | - | - | - | - | - | P | - | S | - |
| 10.2.4.2 | Document titled | P | P | - | - | - | - | P | - | - | P | S | - |
| 10.2.4.3 | Focus order | P | P | - | - | - | - | P | - | - | P | S | - |
| 10.2.4.4 | Link purpose (in context) | P | P | - | - | - | S | P | - | - | P | S | - |
| 10.2.4.6 | Headings and labels | P | P | - | S | - | S | P | - | - | P | S | - |
| 10.2.4.7 | Focus visible | P | P | - | - | - | S | P | - | - | P | S | - |
| 10.2.4.11 | Focus not obscured (minimum) | P | P | - | - | - | S | P | - | - | P | S | - |
| 10.2.5.1 | Pointer gestures | - | - | - | - | - | - | P | P | - | P | S | - |
| 10.2.5.2 | Pointer cancellation | - | P | - | - | - | - | P | P | - | P | S | - |
| 10.2.5.3 | Label in name | - | - | - | - | - | - | P | P | - | S | S | - |
| 10.2.5.4 | Motion actuation | S | S | - | - | - | - | P | P | - | S | S | - |
| 10.2.5.7 | Dragging movements | P | P |  |  |  |  | P | P |  | S | S |  |
| 10.2.5.8 | Target size (minimum) |  | P | - | - | - | - | P | P | - | S | S | - |
| 10.3.1.1 | Language of document | P | S | - | S | S | - | - | - | - | S | S | - |
| 10.3.1.2 | Language of parts | P | S | - | S | S | - | - | - | - | S | S | - |
| 10.3.2.1 | On focus | P | P | - | - | - | - | P | - | - | P | S | - |
| 10.3.2.2 | On input | P | P | - | - | - | - | P | - | - | P | S | - |
| 10.3.2.6 | Consistent help | P | P | - | - | - |  | S | - | - | P | S |  |
| 10.3.3.1 | Error identification | P | P | P | - | - | - | - | - | - | P | S | - |
| 10.3.3.2 | Labels or instructions | P | P | - | - | - | S | S | - | - | P | S | - |
| 10.3.3.3 | Error suggestion | P | P | - | - | - | S | S | - | - | P | S | - |
| 10.3.3.4 | Error prevention (legal, financial, data) | P | P | - | - | - | - | S | - | - | P | S | - |
| 10.3.3.7 | Redundant entry | S | S |  |  |  |  | P | S |  | P | S |  |
| 10.3.3.8 | Accessible authentication (minimum) | P | P | P | P | P | P | P | P | P | P | P |  |
| 10.4.1.2 | Name, role, value | P | P | - | - | - | - | S | - | - | - | S | - |
| 10.4.1.3 | Status messages | P | P | P | P | P | P | P | P | P | P | P | - |
| 10.5 | Caption positioning (recommendation) | - | - | - | P | P | - | - | - | - | S | S | - |
| 10.6 | Audio description timing (recommendation) | P | S | - | - | - | - | - | - | - | S | S | - |
| 11.1.1.1 | Non-text content (was 11.1.1.1.1) | P | P | - | P | S | - | - | - | - | S | P | S |
| 11.1.2.1 | Audio-only and video-only (pre-recorded) (was 11.1.2.1.1) | P | P | - | P | P | - | - | - | - | S | P | - |
| 11.1.2.2 | Captions (pre-recorded) | - | - | - | P | P | - | - | - | - | S | S | - |
| 11.1.2.3 | Audio description or media alternative (pre-recorded) (was 11.1.2.3.1) | P | S | - | - | - | - | - | - | - | S | S | - |
| 11.1.2.4 | Captions (live) | - | - | - | P | P | - | - | - | - | S | S | - |
| 11.1.2.5 | Audio description (pre-recorded) | P | S | - | - | - | - | - | - | - | S | S | - |
| 11.1.3.1 | Info and relationships (was 11.1.3.1.1) | P | S | - | - | - | - | - | - | - | S | S | - |
| 11.1.3.2 | Meaningful sequence (was 11.1.3.2.1) | P | S | - | - | - | - | - | - | - | S | S | - |
| 11.1.3.3 | Sensory characteristics | P | P | P | P | P | - | - | - | - | S | P | - |
| 11.1.3.4 | Orientation | - | - | - | - | - | - | P | P | - | S | S | - |
| 11.1.3.5 | Identify input purpose (was 11.1.3.5.1) | - | P | - | - | - | - | - | - | - | - | S | - |
| 11.1.4.1 | Use of colour | P | P | P | - | - | - | - | - | - | S | S | - |
| 11.1.4.2 | Audio control | P | - | - | - | P | - | - | - | - | S | P | - |
| 11.1.4.3 | Contrast (minimum) | - | P | P | - | - | - | - | - | - | S | S | - |
| 11.1.4.4 | Resize text (was 11.1.4.4.1) | - | P | - | - | - | - | - | - | - | - | S | - |
| 11.1.4.5 | Images of text (was 11.1.4.5.1) | - | P | P | - | - | - | - | - | - | S | S | - |
| 11.1.4.10 | Reflow | - | P | - | - | - | - | - | - | - | - | S | - |
| 11.1.4.11 | Non-text contrast | - | P | P | - |  | - | - | - | - | S | S | - |
| 11.1.4.12 | Text spacing | - | P | - | - | - | - | - | - | - | P | S | - |
| 11.1.4.13 | Content on hover or focus | - | P | - | - | - | - | - | - | - | P | S | - |
| 11.2.1.1 | Keyboard (was 11.2.1.1.1) | P | P | - | - | - | S | P | - | - | - | S | - |
| 11.2.1.2 | No keyboard trap | P | P | - | - | - | S | P | - | - | - | S | - |
| 11.2.1.4 | Character key shortcuts (was 11.2.1.4.1) | - | - | - | - | - | - | P | P | - | S | S | - |
| 11.2.2.1 | Timing adjustable | P | P | - | P | P | - | P | - | - | P | P | - |
| 11.2.2.2 | Pause, stop, hide | P | P | - | P | P | - | P | - | - | P | P | - |
| 11.2.3.1 | Three flashes or below threshold | - | - | - | - | - | - | - | - | P | - | S | - |
| 11.2.4.3 | Focus order | P | P | - | - | - | - | P | - | - | P | S | - |
| 11.2.4.4 | Link purpose (in context) | P | P | - | - | - | S | P | - | - | P | S | - |
| 11.2.4.6 | Headings and labels | P | P | - | S | - | S | P | - | - | P | S | - |
| 11.2.4.7 | Focus visible | P | P | - | - | - | S | P | - | - | P | S | - |
| 11.2.4.11 | Focus not obscured (minimum) | P | P | - | - | - | S | P | - | - | P | S | - |
| 11.2.5.1 | Pointer gestures | - | - | - | - | - | - | P | P | - | P | S | - |
| 11.2.5.2 | Pointer cancellation | - | P | - | - | - | - | P | P | - | P | S | - |
| 11.2.5.3 | Label in name (was 11.2.5.3.1) | - | - | - | - | - | - | P | P | - | S | S | - |
| 11.2.5.4 | Motion actuation | S | S | - | - | - | - | P | P | - | S | S | - |
| 11.2.5.7 | Dragging movements | P | P |  |  |  |  | P | P |  | S | S |  |
| 11.2.5.8 | Target size (minimum) |  | P | - | - | - | - | P | P | - | S | S |  |
| 11.3.1.1 | Language of software (was 11.3.1.1.1) | P | S | - | S | S | - | - | - | - | S | S | - |
| 11.3.2.1 | On focus | P | P | - | - | - | - | P | - | - | P | S | - |
| 11.3.2.2 | On input | P | P | - | - | - | - | P | - | - | P | S | - |
| 11.3.2.4 | Consistent identification | S | P | - | - | - |  | S | - | - | P | S |  |
| 11.3.3.1 | Error identification (was 11.3.3.1.1) | P | P | P | - | - | - | - | - | - | P | S | - |
| 11.3.3.2 | Labels or instructions | P | P | - | - | - | S | S | - | - | P | S | - |
| 11.3.3.3 | Error suggestion | P | P | - | - | - | S | S | - | - | P | S | - |
| 11.3.3.4 | Error prevention (legal, financial, data) | P | P | - | - | - | - | S | - | - | P | S | - |
| 11.3.3.7 | Redundant entry | S | S |  |  |  |  | P | S |  | P | S |  |
| 11.3.3.8 | Accessible authentication (minimum) | P | P | P | P | P | P | P | P | P | P | P |  |
| 11.4.1.2 | Name, role, value (was 11.4.1.2.1) | P | P | - | - | - | - | S | - | - | - | S | - |
| 11.4.1.3 | Status messages | P | P | P | P | P | P | P | P | P | P | P | - |
| 11.5.1 | Closed functionality | P | P | - | P | P | P | P | - | - | P | P | - |
| 11.5.2.1 | Platform interoperability with assistive technologies | P | P | P | P | P | P | P | S | S | P | P | S |
| 11.5.2.3 | Use of accessibility services (recommendation) | P | P | P | P | P | P | P | S | S | P | P | S |
| 11.5.2.4 | Assistive technology | P | P | S |  |  | - | P | S | S | P | S | S |
| 11.5.2.5 | Object information | P | P | P | P | P | P | P | S | S | P | P | S |
| 11.5.2.6 | Row, column, and headers | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.7 | Values | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.8 | Label relationships | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.9 | Parent-child relationships | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.10 | Text | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.11 | List of available actions | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.12 | Execution of available actions | P | P | - | - | - | - | P | - | - | P | S | - |
| 11.5.2.13 | Tracking of focus and selection attributes | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.14 | Modification of focus and selection attributes | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.15 | Change notification | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.16 | Modifications of states and properties | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.5.2.17 | Modifications of values and text | P | P | - | - | - | - | P | - | - | S | S | - |
| 11.6.1 | User control of accessibility features | P | P | P | P | P | P | P | P | P | P | P | P |
| 11.6.2 | No disruption of accessibility features | P | P | P | P | P | P | P | P | P | P | P | P |
| 11.7 | User preferences | P | P | P | P | P | P | P | P | P | P | P | P |
| 11.8.1 | Content technology | P | P | P | P | P | P | P | P | P | P | P | P |
| 11.8.2 | Accessible content creation | P | P | P | P | P | P | P | P | P | P | P | P |
| 11.8.3 | Preservation of accessibility information in transformations | P | P | P | P | P | P | P | P | P | P | P | P |
| 11.8.4 | Repair assistance | P | P | P | P | P | P | P | P | P | P | P | P |
| 11.8.5 | Templates | P | P | P | P | P | P | P | P | P | P | P | P |
| 12.1.1 | Accessibility and compatibility features | P | P | P | P | P | S | P | P | P | P | P | P |
| 12.1.2 | Accessible documentation | P | P | P | P | P | S | P | P | P | P | P | P |
| 12.2.2 | Information on accessibility and compatibility features | P | P | P | P | P | P | P | P | P | P | P | P |
| 12.2.3 | Effective communication | P | P | P | P | P | P | P | P | P | P | P | P |
| 12.2.4 | Accessible documentation | P | P | P | P | P | S | P | P | P | P | P | P |
| 13.1.2.2 | Assignment of the user identifier for the primary users of relay services |  |  |  | P | P | P |  |  |  |  | S |  |
| 13.1.2.3 | Conveying of caller identifier in relayed communications for primary relay users |  |  |  | P | P | P |  |  |  |  | S |  |
| 13.1.2.4 | Relay service invocation decision in outgoing communications |  |  |  | P | P | P |  |  |  |  | S |  |
| 13.1.2.5 | Relay service invocation decision in incoming communications |  |  |  | P | P | P |  |  |  |  | S |  |
| 13.1.2.6 | Relay service support requested by the primary user for emergency communications |  |  |  | P | P | P |  |  |  |  | S |  |
| 13.1.3.1 | Relaying action in relay service communication |  |  |  | P | P | P |  |  |  |  | S |  |
| 13.1.3.2 | Media handling in relay service communication |  |  |  | P | P | P |  |  |  |  | S |  |
| 13.1.3.3 | Relay service support in ICT based conferences |  |  |  | P | P | P |  |  |  |  | S |  |
| 13.1.3.4 | Relay service support during emergency communications initiated by the PSAP |  |  |  | P | P | P |  |  |  |  | S |  |

## B.2 Interpretation of Table B.2

### B.2.0 General

Table B.2 illustrates the impact a specific accessibility issue might have on different users. It does this by mapping the requirements in the standard with the functional performance statements in clause 4. A requirement can be Primary (P) or Secondary (S).

The technical requirements are listed in a vertical column and the functional performance statements horizontally.



The table indicates which functional performance statements, and corresponding user needs, are covered by each requirement.

### B.2.1 Example

#### B.2.1.1 Step 1

For requirement 5.1.3.11, which relates to the possibility of changing the volume when the user is listening in a private headset, the table can be read like this: Step 1 illustration 1

A copy of table B.2 header row and "5.1.3.11 Private listening volume"

The requirement for private listening volume has a "P" for primary support in the column "WV", which stands for "without vision".



Step 1 illustration 2

A copy of table B.2 header row and "5.1.3.11 Private listening volume" with the first column "without vision" highlighted, showing that 5.1.3.11 has a primary relationship

This means that private listening volume supports the functional performance statements for users who cannot see. In other words, the possibility for the user to control the volume when listening via a private headset is necessary for blind users.

#### B.2.1.2 Step 2

The second column shows that, for users with low vision, the possibility to control the volume when listening via a private headset is not as necessary as for blind users, it has an S for Secondary, where the first column had a P for Primary.

Step 2 illustration

A copy of table B.2 header row and "5.1.3.11 Private listening volume" with the second column "limited vision" highlighted, showing that 5.1.3.11 has a secondary relationship

Secondary support means that some users in this group may use the accessibility feature in specific situations.

#### B.2.1.3 Step 3

In this way it is possible to assess the impact on functional performance statements if a particular requirement is not met.

Step 3 illustration

A copy of table B.2 header row and "5.1.3.11 Private listening volume" with the third column "without perception of colour" highlighted, showing that requirement 5.1.3.11 is not relevant

The third column considers users who are color blind; the requirement on private listening volume is not marked at all. Of course, the possibility of changing the volume when listening in private headset is nice to have for all users, no matter their ability to distinguish between colors, but the listening volume does not compensate for the color blindness.

#### B.2.1.4 Step 4

The table can also be read the other way around:

Since blind users cannot see the screen, they need an alternative way to use the interface. If this alternative is audio via private headset, blind users need the possibility to change the volume.

Step 4 illustration 1

A copy of table B.2 header row and "5.1.3.11 Private listening volume" with the first column "without vision" highlighted to show that 5.1.3.11 and functional performance statement 4.2.1 have a primary relationship

Some users who can see, but not well, need or prefer to use audio as an alternative way to use the interface. If this alternative is audio via private headset, some low vision users will benefit from the possibility to change the volume.

Step 4 illustration 2

A copy of table B.2 header row and "5.1.3.11 Private listening volume" with the second column "limited vision" highlighted to show that 5.1.3.11 and functional performance statement 4.2.2 have a secondary relationship

# Annex C (normative): Determination of conformance

## C.1 Introduction

This normative annex sets out the means necessary to determine conformance with the individual requirements set out in the body of the present document.

To assist the reader, empty clauses are inserted in order to make the numbering of the annex reflect the clause numbers in the requirements.

## C.2 Empty clause

This clause is intentionally left empty.

## C.3 Empty clause

This clause is intentionally left empty.

## C.4 Functional performance

Clause 4 is informative and contains no testable requirements.

## C.5 Generic requirements

### C.5.1 Closed functionality

#### C.5.1.1 Introduction (informative)

Clause 5.1.1 is informative only and contains no testable requirements.

#### C.5.1.2 General

##### C.5.1.2.1 Closed functionality

See clauses C.5.2 to C.13, as applicable.

##### C.5.1.2.2 Assistive technology

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality). |
| Procedure | 1. Determine the functionality of the ICT that is closed.  2. Check that the tests C.5.1.3 to C.5.1.6 can be carried out without the attachment or installation of any [assistive technology](#assistiveTechnology) except personal headsets or inductive loops. |
| Result | Pass: Check 2 is true  Fail: Check 2 is false  Not applicable: Pre-condition 1 is not met. |

#### C.5.1.3 Non-visual access

##### C.5.1.3.1 Audio output of visual information

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Visual information is needed to enable the use of the closed functionality of the ICT. |
| Procedure | 1. Determine the functionality of the ICT that is closed.  2. Check that they are all operable using audio output access. |
| Result | Pass: Check 2 is true  Fail: Check 2 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.5.1.3.2 Auditory output delivery including speech

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Auditory output is provided as non-visual access to closed functionality. |
| Procedure | 1. Check that the auditory output is delivered by a mechanism included in or provided with the ICT.  2. Check that the auditory output is delivered by a personal headset that can be connected through a 3,5 mm audio jack without requiring the use of vision. |
| Result | Pass: Check 1 or 2 is true  Fail: Checks 1 and 2 are false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.5.1.3.3 Auditory output correlation (informative)

Clause 5.1.3.3 is informative only and contains no testable requirements.

##### C.5.1.3.4 Speech output user control

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Speech output is provided as non-visual access to closed functionality. |
| Procedure | 1. Check that the speech output is capable of being interrupted when requested by the user.  2. Check that the speech output is capable of being repeated when requested by the user. |
| Result | Pass: All checks are true  Fail: Any check is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.5.1.3.5 Speech output automatic interruption

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Speech output is provided as non-visual access to closed functionality. |
| Procedure | 1. Determine the closed functions of the ICT.  2. Check that the speech output for each single function is interrupted on a user action.  3. Check that the speech output for each single function is interrupted when new speech output begins. |
| Result | Pass: Check 2 and 3 are true  Fail: Check 2 or 3 are false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.5.1.3.6 Speech output for non-text content

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. [Non-text content](#nonTextContent) is presented to users. |
| Procedure | 1. Check that speech output is provided as an alternative for non-text content.  2. Check that the non-text content is not pure decoration.  3. Check that the non-text content is not used only for visual formatting.  4. Check that the speech output follows the guidance for "text alternative" described in WCAG 2.2 Success Criterion 1.1.1. |
| Result | Pass: Checks 1 and 2 and 3 and 4 are true; or 1 and 2 are false; or 1 and 3 are false  Fail: Checks 1 is true and 2 false; or 1 is true and 3 false; or 1 and 2 and 3 are true and 4 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.5.1.3.7 Speech output for video information

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Pre-recorded video [content](#content) is needed to enable the use of closed functionality of the ICT.  3. Speech output is provided as non-visual access to non-text content displayed on closed functionality. |
| Procedure | 1. Check that the speech output presents equivalent information for the pre-recorded video content. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-conditions 1 or 2 or 3 are not met |

##### C.5.1.3.8 Masked entry

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Auditory output is provided as non-visual access to closed functionality.  3. The characters displayed are masking characters.  4. Any option to allow non-private auditory output has not been activated. |
| Procedure | 1. Check that the auditory output is not a spoken version of the characters entered.  2. Check that the auditory output is known to be delivered only to a mechanism for private listening. |
| Result | Pass: Any check is true  Fail: All checks are false  Not applicable: Pre-conditions 1 or 2 or 3 or 4 are not met |

##### C.5.1.3.9 Private access to personal data

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Auditory output is provided as non-visual access to closed functionality.  3. The output contains data.  4. There is an applicable privacy policy which considers that data to be private. |
| Procedure | 1. Check that the auditory output is only delivered through a mechanism for private listening.  2. Check that the mechanism for private listening can be connected without requiring the use of vision.  3. Check that the auditory output is delivered through all user-selectable mechanisms. |
| Result | Pass: Checks 1 and 2 or 3 are true  Fail: Checks 1 or 2 and 3 are false  Not applicable: Pre-conditions 1 or 2 or 3 or 4 are not met |

##### C.5.1.3.10 Non-interfering audio output

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Auditory output is provided as non-visual access to closed functionality.  3. The ICT automatically plays interfering audible output. |
| Procedure | 1. Check that the interfering audible output lasts no longer than three seconds. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-conditions 1 or 2 or 3 are not met |

##### C.5.1.3.11 Private listening volume

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. The auditory output is provided as non-visual access to closed functionality.  3. The auditory output is delivered through a mechanism for private listening. |
| Procedure | 1. Check that there is at least one non-visual mode of operation for controlling the volume. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-conditions 1 or 2 or 3 are not met |

##### C.5.1.3.12 Speaker volume

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. The auditory output is provided as non-visual access to closed functionality.  3. The auditory output is delivered through speakers on the ICT. |
| Procedure | 1. Check that a non-visual incremental volume control is provided.  2. Check that output amplification up to a level of at least 65 dBA (-29 dBPaA) is available. |
| Result | Pass: Checks 1 and 2 are true  Fail: Check 1 or 2 is false  Not applicable: Pre-conditions 1 or 2 or 3 are not met |

##### C.5.1.3.13 Volume reset

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. The auditory output is provided as non-visual access to closed functionality.  3. The ICT is not dedicated to a single user. |
| Procedure | 1. Check that a function is provided to automatically reset the volume to be at a level of 65 dBA or less after every use. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-conditions 1 or 2 or 3 are not met |

##### C.5.1.3.14 Spoken languages

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. The speech output is provided as non-visual access to closed functionality.  3. The speech output is not proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text.  4. The content is not generated externally and is under the control of the ICT vendor.  5. The displayed languages can be selected using non-visual access.  6. The user has not selected a speech language that is different from the language of the displayed content. |
| Procedure | 1. Check that the speech output is in the same human language of the displayed content provided. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-conditions 1 or 2 or 3 or 4 or 5 or 6 are not met |

##### C.5.1.3.15 Non-visual error identification

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. Speech output is provided as non-visual access to closed functionality.  3. An input error is automatically detected. |
| Procedure | 1. Check that speech output identifies the item that is in error.  2. Check that the speech output describes the item that is in error. |
| Result | Pass: Checks 1 and 2 are true  Fail: Check 1 or check 2 false  Not applicable: Pre-conditions 1 or 2 or 3 are not met |

##### C.5.1.3.16 Receipts, tickets and transactional outputs

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality).  2. The ICT provides receipts, tickets, or other outputs as a result of a self-service transaction.  3. The information being checked is not printed and is not needed to complete the transaction, such as receipts, itineraries, maps, etc. |
| Procedure | 1. Check that speech output is provided which includes, all information necessary to complete or verify the transaction. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-conditions 1, 2 or 3 are not met |

#### C.5.1.4 Functionality closed to text enlargement

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality)  2. A functionality of the ICT is closed to enlargement features of [platform](#platformSoftware) or [assistive technology](#assistiveTechnology).  3. A viewing distance is specified by the supplier. |
| Procedure | 1. Measure the height of a capital letter H.  2. Check that it subtends an angle of at least 0,7 degrees at the specified viewing distance. |
| Result | Pass: Check 2 is true  Fail: Check 2 is false  Not applicable: Pre-conditions 1 or 2 or 3 are not met |

#### C.5.1.5 Visual output for auditory information

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality)  2. Auditory information is needed to enable the use of closed functionionality of ICT. |
| Procedure | 1. Check that the visual information is equivalent to the pre-recorded auditory output. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.5.1.6 Operation without keyboard interface

##### C.5.1.6.1 Closed functionality

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality)  2. ICT functionality is closed to keyboards or keyboard interfaces. |
| Procedure | 1. Check that all functionality is operable without vision. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.5.1.6.2 Input focus

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality)  2. ICT functionality is closed to keyboards or keyboard interfaces.  3. Input focus can be moved to a user interface element. |
| Procedure | 1. Check that it is possible to move the input focus away from that element using the same mechanism. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met |

#### C.5.1.7 Access without speech

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality)  2. Speech is needed to enable the use of closed functionality of the ICT. |
| Procedure | 1. Check that the closed functions can be enabled by an alternative input mechanism that does not require speech. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.5.1.8 Identify input purpose (closed functionality) (was C.11.1.3.5.2)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes [closed functionality](#closedfunctionality). |
| Procedure | 1. For each input field that collects information about a user check that it serves a purpose identified in the [Input Purposes for User Interface Components section of WCAG 2.2.](https://www.w3.org/TR/WCAG22/" \l "input-purposes)  2. Check that there is auditory output that conforms to clause [5.1.3.2](#_5.1.3.2_Auditory_output).  3. Check that the auditory output describes the input purpose. |
| Result | Pass: Checks 2 and 3 are true  Fail: Check 2 or Check 3 is false  Not applicable: Pre-condition 1 is not met. |

### C.5.2 Activation of accessibility features

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes documented [accessibility](#accessibility) features. |
| Procedure | 1. Check that it is possible to activate those accessibility features without relying on a method that does not support that need. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

### C.5.3 Biometrics

|  |  |
| --- | --- |
| Type of assessment | Testing 1 |
| Pre-conditions | 1. The ICT uses biological characteristic for user identification. |
| Procedure | 1. Check that another means can be used for user identification. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |
| Type of assessment | Testing 2 |
| Pre-conditions | 1. The ICT uses biological characteristic for control of ICT. |
| Procedure | 1. Check that another means can be used for control of ICT. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

### C.5.4 Preservation of accessibility information during conversion

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT converts information or communication  2. Non-proprietary information provided for accessibility is documented.  3. The non-proprietary information provided for accessibility can be contained in the destination format.  4. The non-proprietary information provided for accessibility can be supported by the destination format. |
| Procedure | 1. Check that the non-proprietary information provided for accessibility is preserved when the ICT converts information or communication. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1, 2, 3 or 4 is not met |

### C.5.5 Operable parts

#### C.5.5.1 Means of operation

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [operable parts](#operablePart) that require grasping, pinching, or twisting of the wrist to operate. |
| Procedure | 1. Check that there is an accessible alternative means of operation that does not require these actions. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.5.5.2 Operable part discernibility

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes [operable parts](#operablePart). |
| Procedure | 1. Identify that there is a means to discern each operable part without vision.  2. Check that the action associated with the operable part has not been performed when using the means to discern each operable part of step 1. |
| Result | Pass: Checks 1 and 2 are true  Fail: Checks 1 or 2 are false  Not applicable: Pre-condition 1 is not met. |

### C.5.6 Locking or toggle controls

#### C.5.6.1 Tactile or auditory status

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT has a locking or toggle control. |
| Procedure | 1. Check that there is at least one mode of operation where the status of all locking or toggle controls can be determined through touch without operating the control. 2. Check that there is at least one mode of operation where the status of all locking or toggle controls can be determined through sound without operating the control. |
| Result | Pass: Check 1 or 2 is true  Fail: Checks 1 and 2 are false  Not applicable: Pre-condition 1 or 2 is not met |

#### C.5.6.2 Visual status

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT includes a locking or toggle control. |
| Procedure | 1. Check that there is at least one mode of operation where the status of all locking or toggle controls can be visually determined when the control is presented. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

### C.5.7 Key repeat

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes a key repeat function.  2. The key repeat function cannot be turned off.  3. The key repeat will result in the generation of multiple entries of the same alphanumeric data into input fields or into documents. |
| Procedure | 1. Check that the delay before key repeat can be adjusted to at least 2 seconds.  2. Check that the key repeat rate can be adjusted to 2 seconds per character. |
| Result | Pass: Checks 1 and 2 are true  Fail: Check 1 or 2 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met |

### C.5.8 Double-strike key acceptance

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT includes a keyboard or keypad. |
| Procedure | 1. Check that there is a mechanism that allows adjustment of the delay after any keystroke, during which an additional key-press will not be accepted if it is identical to the previous keystroke.  2. Adjust that mechanism to its maximum setting.  3. Press any key.  4. After a delay of 0,5 seconds press the same key as that pressed in step 3.  5. Check whether the keystroke of step 4 has been accepted. |
| Result | Pass: Check 1 is true and check 5 is false  Fail: Check 1 is false or check 5 is true  Not applicable: Pre-condition 1 is not met. |

### C.5.9 Simultaneous user actions

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT has a mode of operation requiring simultaneous user actions for its operation. |
| Procedure | 1. Check that there is a mode of operation that does not require simultaneous user actions.  2. Determine all the user controllable functions of the ICT.  3. Check that each user controllable function can be operated with a single user action. |
| Result | Pass: Check 3 is true  Fail: Check 3 is false for all modes of operation  Not applicable: Pre-condition 1 is not met. |

## C.6 ICT supporting continuous bidirectional communication

### C.6.0 Accessible continuous bidirectional communication operational scenarios

#### C.6.0.1 Rationale for scenarios (informative)

Clause 6.0.1 is informative only and contains no testable requirements.

#### C.6.0.2 Communication client

|  |  |
| --- | --- |
| Pre-conditions | 1. The ICT under test is, or includes, a [communication client](#communicationclient) that supports continuous bidirectional voice communication with or within a [communication system](#communicationsystem) that supports continuous bidirectional voice communication.  2. A communication system that supports bi-directional voice communication for this communication client and supports the RTT functionality under test, is available.  3. Another ICT that meets the same pre-condition as the ICT under test is available.  (If multiparty voice communications are supported by the ICT – then 3 suitable ICTs will be needed). |
| Procedure | Perform all [applicable C.6.1-C.6.6 tests](#applicabletest) when the communication client under test is communicating with the communication system. |
| NOTE: If the only communication system that is available that supports the feature under test has not yet been independently validated, it can still be useful to demonstrate that the client under test provides the functionality if a pass is achieved or to demonstrate the extent of support. | |

#### C.6.0.3 Communication system

|  |  |
| --- | --- |
| Pre-conditions | 1. The ICT under test is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication with [communication clients](#communicationclient) of the system  2. Two communication clients that support bidirectional voice communications with the communication system under test, and supports the functionality under test, are available.  3. If the system supports multiparty voice communication, then the communication clients in pre-condition 2 will need to support multiparty RTT communication, and a third such ICT will also be needed. |
| Procedure | Perform all [applicable C.6.1-C.6.6 tests](#applicabletest) when the communication system under test is communicating with the communication clients. |
| NOTE: If the only communication client that is available that supports the feature under test has not yet been independently validated, it can still be useful to demonstrate that the system under test provides the functionality if a pass is achieved or to demonstrate the extent of support. | |

#### C.6.0.4 Communication system that connects to another communication system

|  |  |
| --- | --- |
| Pre-conditions | 1. The ICT under test is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication with one or more other communication systems that support continuous bidirectional voice communication,  2. Another communication system that supports continuous bidirectional voice communication and that supports bidirectional RTT is available.  3. A [communication client](#communicationclient) is available for each communication system that allows bidirectional voice communications and supports the functionality under test.,  4. Each communication client is connected to its respective communication system. |
| Procedure | Perform all [applicable C.6.1-C.6.6 tests](#applicabletest) when the communication system under test is communicating with the communication clients. |
| NOTE: If the only communication client that is available that supports the feature under test has not yet been independently validated, it can still be useful to demonstrate that the system under test provides the functionality if a pass is achieved or to demonstrate the extent of support. | |

#### C.6.0.5 Communication system when a communications client is in roaming mode

|  |  |
| --- | --- |
| Pre-conditions | 1. The ICT under test is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication.  2. A [communication client](#communicationclient) that supports continuous bidirectional voice communication with another [compatible communication system](#compatiblecommunicationsystem), is available and is visiting and is connected to the system under test.  3. A communication client that is qualified for bidirectional voice communication on the ICT under test and that supports the functionality under test, is available. |
| Procedure | Perform all [applicable C.6.1-C.6.6 tests](#applicabletest) when the communication system under test is communicating with the [visiting communication client](#visitingcommunicationclient). |
| NOTE: This scenario is intended to cover a roaming case. In roaming, which is specific to mobile networks, whenever ICT is brought out of the reach of the home network it connects to (roams on) a visited network.. | |

#### C.6.0.6 Communication client in emergency communications

|  |  |
| --- | --- |
| Pre-conditions | 1. The ICT under test is, or includes, a [communication client](#communicationclient) that supports continuous bidirectional voice emergency communication with or within a [communication system](#communicationsystem) that supports continuous bidirectional voice emergency communication.  2. A communication system that supports bi-directional voice emergency communication for this communication client and supports the functionality under test, is available.  3. An agreement is in place for tests with the emergency communication PSAP or with test PSAP to which test communications are expected to be routed |
| Procedure | Perform all [applicable C.6.1-C.6.6 tests](#applicabletest) when the communication client under test is communicating with the communication system. |

#### C.6.0.7 Communication system that conveys emergency communications

|  |  |
| --- | --- |
| Pre-conditions | 1. The ICT under test is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication and is specified to support emergency communications.  2. A [communication client](#communicationclient) that supports the functionality under test is available for use with the ICT under test.  3. An agreement is in place for tests with the emergency communication PSAP or test PSAP to which test communications are expected to be routed. |
| Procedure | Perform all [applicable C.6.1-C.6.6 tests](#applicabletest) when the communication system under test is communicating with the communication client. |

#### C.6.0.8 Communication system specified to support emergency communications when a visiting client is in roaming mode

|  |  |
| --- | --- |
| Pre-conditions | 1. The ICT under test is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication and is specified to support emergency communications and roaming of [communications clients](#communicationclient) from other communications systems.  2. A [communication client](#communicationclient) of the ICT that supports continuous bidirectional voice communication, is visiting another country than the home country.  3. An agreement is in place for tests with the emergency communication PSAP or test PSAP to which test communications are expected to be routed. |
| Procedure | Perform all [applicable C.6.1-C.6.6 tests](#applicabletest) when the communication system under test is communicating with the [visiting communication client](#visitingcommunicationclient). |
| NOTE: This scenario is intended to cover a roaming case. In roaming, which is specific to mobile networks, whenever ICT is brought out of the reach of the home network it connects to (roams on) a visited network.. | |

#### C.6.0.9 Communication system that conveys emergency communications with communications client visiting other country

|  |  |
| --- | --- |
| Pre-conditions | The ICT under test is, or includes, a [communication system](#communicationsystem) that supports continuous bidirectional voice communication and is specified to support emergency communications.  2. A communication client visiting another country than the home country is available for use with the ICT under test.  3. An agreement is in place for tests with the emergency communication PSAP or test PSAP to which test communications are expected to be routed. |
| Procedure | Perform all [applicable C.6.1-C.6.6 tests](#applicabletest) when communicating with the communication client and a PSAP in the visited country in emergency communications. |
| NOTE: For test with production PSAP the expected PSAP would be within the visited country or region. | |

### C.6.1 Audio bandwidth for voice communication

|  |  |
| --- | --- |
| Type of assessment | Measurement |
| Pre-conditions | 1. The ICT under test provides functionality that allows provides continuous bidirectional voice communication.  2. The pre-conditions for the scenario used for testing |
| Procedure | **1. Check** that the ICT can encode and decode audio with a frequency range with an upper limit of at least 7 000 Hz. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |



### C.6.2 Real-Time Text (RTT)

#### C.6.2.1 RTT

##### C.6.2.1.1 RTT Functionality

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test provides functionality that allows continuous bidirectional voice communication.  2. Design changes to add input or output hardware to the ICT are not required.  3. The pre-conditions for the scenario used for testing. |
| Procedure | **1.** A communication session is established between two [communication clients](#communicationclient).  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2.** Text is entered into communication client 1 in a steady flow without pauses for 10 seconds without send or return.  **3.** **Check** that the text received by communication client 2 is presented without any pause longer than 1 second  **4.** Text is entered into the communication client 2 in a steady flow without pauses for 10 seconds without send or return. **5.** **Check** that the text received by communication client 1 is presented without any pause longer than 1 second |
| Result | Pass: Checks 3 and Check 5 are true  Fail: One or more checks are false  Not applicable: Pre-conditions 1 and 2 are not met  Not testable: Pre-condition 3 is not met |

##### C.6.2.1.2 Concurrent voice and text

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test provides continuous bidirectional voice communication, and supports [RTT](#realTimeText).  2. The pre-conditions for the scenario used for testing |
| Procedure | **1. Initiation:** A communication session is established from [communication client](#communicationclient) 1 to communication client 2  (and a communication client 3 if multiparty voice communication is supported)  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. C1 Activates RTT:** Communication client 1 turns on RTT if not on by default  **3. 10 seconds typing out:** Text is entered on Communication client 1 in a steady human-like flow continuously for 10 seconds without any return or send key, while the communicator is also speaking the text aloud.  (If multiparty then communication client 3 should speak instead.)  **4. Check** that while the text is entered on communication client 1 characters appears on communication client 2  **5. Check** that the communicator could be clearly heard simultaneous with text appearing.  **6. 10 seconds typing back:** Text is entered on Communication client 2 in a steady human-like flow continuously for 10 seconds without any return or send key, while the communicator on Communication client 2 is also speaking the text aloud.  (If multiparty – Communication client 3 should be talking and typing)  **7. Check** that while the text is entered on communication client 1 characters appears on communication client 2  **8. Check** that the communicator could be clearly heard simultaneous with text appearing. |
| Result | Pass: All checks are true  Fail: One or more checks are false  Not applicable: At least one precondition is not met |



##### C.6.2.1.3 Single-user operations

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test provides bidirectional voice communication, and ICT supports [RTT](bookmark://realTimeText" \t "_blank).  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Initiation:** A communication session is established from [communication client](#communicationclient) 1 to communication client 2 including a request to get RTT all available media included in the communication.  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  2. Add a communication client 3 to the communication also with RTT, and also video if video is supported by the ICT, and if multiparty voice communication is supported  **3. Check** that all requested media were activated by the same [single user operation](#singleuseroperation)  **4. Check** that that all media requested and supported by communication client 3 was activated by the same single user operation  5. Disconnect the communication from communication client device 1  **6. Check** that all enabled media were disconnected by the same single user operation.  7. Call back from communication client device 2 to communication client device 1  8. Check: that the call back is received and can be answered and that the same media as were provided in the initial communication are provided. |
| Result | Pass: All checks are true  Fail: One or more checks are false  Not applicable: At least one precondition is not met |

#### C.6.2.2 Display of RTT

##### C.6.2.2.1 Distinguishable display

|  |  |  |
| --- | --- | --- |
| Type of assessment | Inspection | |
| Pre-conditions | 1. ICT includes [RTT](#realTimeText) presentation capabilities.  2. The pre-conditions for the scenario you are testing within. | |
| Procedure | **1. Initiation:** A communication session is established from [communication client](#communicationclient) device 1 to communication client 2  (and a communication client 3 if multiparty voice communication is supported)  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. C1 Activates RTT:** Communication client 1 turns on RTT if not on by default  **3. 10 seconds typing out:** Text is entered into communication client 1 in a steady human-like flow continuously for 10 seconds without any return or send key  **4. 10 seconds typing back**: Text is entered into communication client 2 in a steady human-like flow continuously for 10 seconds without any return or send key  **5.** (If multiparty – text should also be entered into Communication client 3)  **6. Check** that all text streams are separate from each other and the source is indicated  **7.** All parties generate a send or return and enter text for 5 seconds  **8. Check** that all past utterances and current text streams are separate from each other and the source is indicated | |
| Result | Pass: All checks are true  Fail: One or more checks are false  Not applicable: At least one precondition is not met | |

##### C.6.2.2.2 Active communicator indication

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test includes [RTT](#realTimeText) send and receive capabilities, and provides speaker indication for voice.  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Initiation:** A communication session is established from [communication client](#communicationclient) 1 to communication client 2  (If multiparty – a communication client 3 should also be included)  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. C1 Activates RTT:** Communication client 1 turns on RTT if not on by default  **3. C2 Speaks:** text and speech are sent from communication client 2 intermittently both separately and simultaneously.  **4. C3 Speaks:** If multiparty speech is supported then C3 should take turns sending speech as well )  **5. Check** that any time that C2 or C3 are speaking there is a visual indication of audio activity on the line. |
| Result | Pass: All Checks are true  Fail: One or more Checks are false  Not applicable: At least one precondition is not met |

##### C.6.2.2.3 Indicator of audio with RTT

|  |  |  |  |
| --- | --- | --- | --- |
| Type of assessment | | Inspection | |
| Pre-conditions | | 1. ICT under test provides bidirectional voice communication, and supports [RTT](#realTimeText).  2. The pre-conditions for the scenario you are testing within. | |
| Procedure | | **1. Initiation:** A communication session is established from [communication client](#communicationclient) 1 to communication client 2  (If multiparty – a communication client 3 should also be included)  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. C1 Activates RTT:** Communication client 1 turns on RTT if not on by default  **3. C2 Speaks:** text and speech are sent from communication client 2 intermittently both separately and simultaneously.  **4. C3 Speaks:** If multiparty speech is supported then C3 should take turns sending speech as well )  **5. Check** that any time that C2 or C3 are speaking there is a visual indication of audio activity on the line. | |
| Result | | Pass: All Checks are true  Fail: One or more Checks are false  Not applicable: At least one precondition is not met | |

##### C.6.2.2.4 Presentation of relative time order

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test includes [RTT](#realTimeText) presentation capabilities.  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1.** A communication session is established from [communication client](#communicationclient) device C1 to communication client C2 including RTT.(and a communication client C3 if multiparty voice communication is supported)  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2.** Text is entered on the Communication clients simultaneously in natural human communication style with occasional commas, full stops and returns or new line keys for 30 seconds.  **3. Check** that the sent and received text are displayed collected in readable blocks and positioned separated so that a relative order can be perceived.  **4.** Each communication client sends text again simultaneously for 10 characters or more and a return or new line key is hit first on C1 and later on C2 and typing continues for a few seconds on the clients.  **5. Check** that on C1 the order of the entered new lines is visually indicated to be earlier from C1 than from C2 (and C3). |
| Result | Pass: All Checks are true  Fail: One or more Checks are false  Not applicable: At least one precondition is not met |

##### C.6.2.2.5 Review of RTT communication contents

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test has [RTT](#realTimeText) presentation capabilities  2. The pre-conditions for the scenario you are testing within |
| Procedure | **1. Initiation:** A communication session is established from [communication client](#communicationclient) device C1 to communication client(s) C2 (and a communication client C3 if multiparty voice communication is supported).  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. C1 Activates RTT:** Communication client C1 turns on RTT if not on by default  **3. Text sent from all clients until scroll:** Text is entered continuously on Communication clients C1 and C2 typing real sentences and sometimes pressing Enter or Return until the text on C1 scrolls. (If multiparty – a communication client C3 should included and be typing too)  **4. C2 Continue typing while C1 views:** Once enough text is sent to cause the display to scroll on C1, C2 (can C3 if one is involved) continues to send text while C1 makes user interface actions needed to view what has been scrolled off screen (usually a page-up request or some other command for scroll back).  **5. Check** that C1 can view text that has been scrolled off screen and with the approximate time order presented.  **6. Check** that the presentation view of earlier text is stable even as new text arrives.  **7. Restart typing:** Type a sentence on C1.  **8. Check** that the display on C1 changes to show the latest received text as well as the latest text sent, and that real-time presentation of new incoming text is re-gained.  **9. End communcation session:** Terminate the current communication.  **10. Check** that the RTT text communication in the latest session can be reviewed after the communication is terminated. |
| Result | Pass: All 4 checks are true  Fail: One or more checks are false  Not applicable: At least one precondition is not met |

#### C.6.2.3 DTMF touch-tone generation during RTT operations

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a [communication client](#communicationclient) and provides functionality that allows continuous bidirectional voice communication  2. The ICT under test supports the generation and transmission of touch-tone signal on voice calls,  3. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Initiation:** A communication session is established from communication client 1 to communication client 2  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. C1 Activates RTT:** Communication client 1 turns on **RTT** if not on by default  **3. C2 next to decoder:** Communication client 2’s speaker is put next to microphone on device running touchtone decoder app.  **4. Tones sent:** Touch-Tones are sent from C1 while in RTT mode.  Text is entered on Communication client 1 in a steady human-like flow continuously for **5.** 10 seconds without any return or send key, while the communicator is also speaking the text aloud.  (If multiparty then communication client 3 should speak instead.)  **6. Check:** That the tones are successfully sent and received on Communication client 2 with enough clarity to properly decode them. |
| Result | Pass: Check is true  Fail: Check is false  Not applicable: Pre-condition 1 is not met |















#### C.6.2.4 RTT responsiveness

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a [communication client](#communicationclient), and supports [RTT](#realTimeText).  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **Option 1 – Preferred Testing Method**  **1. Setup:** Arrange test equipment to measure the time between when a key is pressed and when the character is transmitted from the device  **Note:** In case of encrypted communication, it may be sufficient to observe when the first packet likely containing the character is sent.  **2. Initiate call:** A communication session is established from communication client 1 to communication client 2  **3. 5 seconds typing:** Text is entered on Communication client 1 in a steady human-like flow for 5 seconds to ensure RTT is working  **4. 5 seconds pause:** Wait 5 seconds to make it easy to identify the first packet containing the character entered in step 5  **5. Type 1 character:** Enter one character on communication client 1  **6. Check** Using the test equipment, check that the time between when the character was entered on communication client 1 and when the character was transmitted from the communication client 1 device to the network is not more than 500 msec  **Option 2 – Indirect Test when Method 1 is not easily carried out**  **1. Initiation:** A communication session is established from communication client 1 to communication clients 2  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. 10 seconds typing:** Text is entered on Communication client 1 in a steady human-like flow for 10 seconds without any return or send key  **3. Check** if while the text is entered on communication client 1 each character appears on communication client 2 within 1 second of when it was entered on communication client 1  **Note:** One method for doing this would be by recording a side-by-side video of communication clients 1 and 2 adjacent to a clock with 1/10ths second display to analyze the time difference between characters appearing on the communication clients. |
| Result | Pass: Check in Option 1 is true or Check in Option 2 is true (only one option needs to be run)  Fail: Neither Check is true  Not applicable: At least one precondition is not met  Note: See [clause 6.2.4](#_6.2.4_RTT_responsiveness) Note 4 for motivation for Check 2 being sufficient for compliance. |



#### C.6.2.5 Erasure of previous character in RTT

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test includes [RTT](#realTimeText) capabilities and supports user input  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Initiation:** A communication session is established from [communication client](#communicationclient) 1 to communication client 2  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. C1 Activates RTT:** Communication client 1 turns on RTT if not on by default  **3. 10 numbers sent – 5 deleted:** The characters 0 through 7 are entered on Communication client 2. Then the enter key is typed, then the characters 8 & 9 key are typed, then the delete key is pressed 6 times (the return is counted as one character).  **4. Check** that the 10 characters appear on communication client 1 (8 in one message and 2 in a second message and then all disappear except for 01234.  **5. 10 numbers back – 5 deleted:** The characters 0 through 7 are entered on Communication client 2. Then the enter key is typed, then the characters 8 & 9 key are typed, then the delete key is pressed 6 times (the return is counted as one character).  **6.** (if multiparty – Communication client 3 does the same simultaneously)  **7. Check** that the 10 characters appear on communication client 1 (8 in one message and 2 in a second message and then all disappear except for 01234.  **8. Delete all sent** - Press the delete key on Communication client 1 a sufficient number of times to delete not only the 5 numerals in the last sequence, but also all of the characters entered in the original 10 seconds of typing.  **9. Check** that all characters entered from communication client 1 are deleted including both the latter numerals and all of the text from the original 10 seconds of typing. The screen on communication client 2 should be clear of all text entered on communication client 1.  **10. All Received deleted** - Press the delete key on Communication client 2 a sufficient number of times to delete all of the text entered on communication client 2 up to this point.  **11. Check** that all of the text from communication client 2 is now missing from communication client 1 |
| Result | Pass: Check is true  Fail: Check is false  Not applicable: At least one precondition is not met |

#### C.6.2.6 Processing rate

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test includes [RTT](#realTimeText) capabilities,  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. 90 CPS test:** connect [Communication client](#communicationclient) 1 with three communication clients (possibly including test software operating the user interface of the terminal) through a bridge in a three-party communication  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. Send text simultaneously** – have each of the 3 software communication clients send a sustained 30 CPS stream of text to Communication client 1 at the same time for ten seconds.  **Note:** This can be done by test software applied to a communication client, or possibly, but less reliably, by copy-paste of 300 characters of test text.  **3. Check** that the text is received and displayed as sent. |
| Result | Pass: All checks are true  Fail: One or more checks are false  Not applicable: At least one precondition is not met |

#### C.6.2.7 Character representation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test includes [RTT](#realTimeText) capabilities,  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Initiation:** A communication session is established from [communication client](#communicationclient) 1 to communication client 2  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. Character test:** a block of test text is sent that includes  50 different characters from the Latin-1 part of the ISO/IEC 10646 [i.55] that represent the variety of characters in the set including those with diacritical marks:  A similar sample representing the writing direction(s) and the characters for the languages of the regions in which the ICT is intended to be used and;  15 emojis characters supported by the underlying platform of the receiving Communication client(s) and;  5 instances of a character that is not a recognized character such as HEX:2140  **Note:** if receiving communication client does not support emojis, then any emojis can be sent and the “replacement character” should show in their place on the receiving communication client  **3. Check** that the received and displayed text matches the sent text except that the last 5 characters should be 5 instances of the ISO10646 “replacement character” (Code HEX:FFFD.  **4. Disconnect**  **5. Initiation:** A communication session is established from communication client 2 to  communication client 1  **6. Character test:** a block of test text is sent that includes  50 different characters from the Latin-1 part of the ISO/IEC 10646 that represent the variety of characters in the set including those with diacritical marks:  A similar sample representing the writing direction(s) and the characters for the languages of the regions in which the ICT is intended to be used and;  15 emojis characters supported by the underlying platform of the receiving Communication client(s) and;  5 instances of a character that is not a recognized character such as HEX:2140  **Note:** if receiving communication client does not support emojis, then any emojis can be sent and the “replacement character” should show in their place on the receiving communication client  **7. Check** that the received and displayed text matches the sent text except that the last 5 characters should be 5 instances of the ISO10646 “replacement character” (Code HEX:FFFD. |
| Result | Pass: All checks are true  Fail: One or more checks are false  Not applicable: At least one precondition is not met |

#### C.6.2.8 RTT Input Methods

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT is, or includes, a [communication client](#communicationclient), and supports [RTT](#realTimeText).  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Initiation:** A communication session is established from communication client 1 to communication client 2  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. Try all input options:** Each option for generating text available on the device is tried (e.g. physical or on-screen keyboard, speech, alternate keyboards, keyboards attached via connector, WIFI, Bluetooth, etc, )  **3. Check** that each mode of character input results in text being entered into the RTT function and sent to the other terminal device. |
| Result | Pass: Check is true  Fail: Check is false  Not applicable: At least one precondition is not met |

#### C.6.2.9 RTT activation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test under test includes [RTT](#realTimeText) capabilities,  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Initiation:** A communication session is established from [communication client](#communicationclient) 1 to communication client 2  (and a communication client 3 if multiparty voice communication is supported)  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **2. Speech from Communication client 2:** Speech is sent from Communication client 2 (and 3 if multiparty supported)  **3. C1 Activates RTT:** Communication client 1 turns on RTT if not on by default  **4. 10 seconds typing out:** Text is entered on Communication client 1 in a steady human-like flow continuously for 10 seconds without any return or send key, while the communicator is also speaking the text aloud.  (If multiparty then communication client 3 should speak instead.)  **5. Check** if while the text is entered on communication client 1 each character appears on communication client 2 within 1 second of when it was entered on communication client 1.  **6. New Outgoing Communication:** Communication is terminated and Communication client 1 initiates a communication session with Communication client 2 again.  **(for emergency communication the PSAP is considered as communication client 2 in this test)**  **7. C1 talks:** Speech is sent from T1  **8. C2 Activates RTT:** Communication client 2 turns on RTT  **9. 10 seconds typing in:** Text is entered on Communication client 2 in a normal fashion  **10. Check** that text is appearing on Communication client 1  **11. New incoming Communication:** Communication is terminated and Communication client 2 initiates a communication session with Communication client 1.  **12. C2 talks:** Speech is sent from T2  **13. C1 Activates RTT:** Communication client 1 turns on RTT  **14. 10 seconds typing in:** Text is entered on Communication client 2 in a normal fashion  **15. Check** that text is appearing on Communication client 1  **16. New incoming Communication:** Communication is terminated and Communication client 2 initiates a communications session with Communication client 1.  **17. C1 talks:** Speech is sent from T1  **18. C2 Activates RTT:** Communication client 2 turns on RTT  **19. 10 seconds typing in:** Text is entered on Communication client 2 in a normal fashion  **20. Check** that text is appearing on Communication client 1 |
| Result | Pass: All checks are true  Fail: One or more checks are false  Not applicable: At least one precondition is not met |

#### C.6.2.10 RTT interoperability

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT provides functionality that allows continuous bidirectional voice communication and connects to another provider’s ICT that allows continuous bidirectional voice communication  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Check** that the set of specifications documented for the ICT under test to be used for RTT interoperability in the scenario used for testing matches the set of specifications to be used for [RTT](#realTimeText) interoperability documented for the other ICT used in the scenario for testing.  **2. Check** that the set of specifications documented for the ICT under test to be used for RTT interoperability is ITU-T Recommendation T.140 [i.38] for functions including coding and presentation and RFC 4103 [i.13] updated by RFC 9071 [i.54] for other aspects of RTT communication |
| Result | Pass: Check 1 OR check 2 is true  Fail: Both Check 1 and Check 2 are false  Not applicable: At least one precondition is not met |

### C.6.3 Caller ID

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT provides caller identification, or other identification functions.  2. The pre-conditions for the scenario you are testing within. |
| Procedure | **1.** **Check** that the information delivered by each function is available in text form.  **2.** **Check** that the information delivered by each function is [programmatically determinable](#programmaticallyDeterminable). |
| Result | Pass: Check 1 is true and either check 2 is true or the functionality is closed  Fail: Check 1 is false or check 2 is false when the functionality is not closed  Not applicable: Pre-condition 1 is not met. |

### C.6.4 Alternatives to voice-based services

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT provides real-time voice-based communication.  2. The ICT provides voice mail, auto-attendant, or interactive voice response facilities.  3. The pre-conditions for the scenario you are testing within. |
| Procedure | 1. **Check** that the ICT offers users a means to access the information without the use of hearing or speech.  2. **Check** that a user can carry out the tasks provided by the system without the use of hearing or speech. |
| Result | Pass: All checks are true  Fail: One or more checks are false  Not applicable: Pre-condition 1 or 2 is not met |

### C.6.5 Video communication

#### C.6.5.1 General (informative)

Clause 6.5.1 is informative only and contains no testable requirements.

#### C.6.5.2 Resolution

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT provides continuous bidirectional voice communication.  2. The ICT includes continuous bidirectional video functionality.  3. The pre-conditions for the scenario you are testing within. |
| Procedure | **1.** **Check** that the video communication resolution is QVGA resolution or better. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

#### C.6.5.3 Frame rate

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT provides continuous bidirectional voice communication.  2. The ICT includes continuous bidirectional video functionality.  3. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Check** that the video communication frame rate is equal to or higher than 20 frames per second. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

#### C.6.5.4 Synchronization between audio and video

|  |  |
| --- | --- |
| Type of assessment | Measurement |
| Pre-conditions | 1. The ICT provides continuous bidirectional voice communication.  2. The ICT includes continuous bidirectional video functionality.  3. The pre-conditions for the scenario you are testing within. |
| Procedure | **1. Check** that audio is presented within 90 ms before video and 185 ms after video. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

#### C.6.5.5 Visual indicator of audio with video

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT provides continuous bidirectional voice communication.  2. ICT has continuous bidirectional video capabilities.  3. The pre-conditions for the scenario you are testing within. |
| Procedure | **1.** ICT under test is connected to another ICT providing continuous bidirectional voice communication that is compatible with the voice communication on the ICT under test.  **2.** A person speaks into the other ICT.  **3.** **Check** by observation whether there is a real-time visual indicator of audio activity. |
| Result | Pass: Check 3 is true  Fail: Check 3 is false  Not applicable: Pre-condition 1 or 2 is not met |
| Note: The indicator should flicker in real time in a way that reflects the audio activity. | |

#### C.6.5.6 Speaker identification with video (sign language) communication

|  |  |
| --- | --- |
| Type of assessment | Measurement |
| Pre-conditions | 1. The ICT provides continuous bidirectional voice communication.  2. The ICT includes continuous bidirectional video communication.  3. The ICT provides speaker identification for voice users.  4. The pre-conditions for the scenario you are testing within. |
| Procedure | **1.** The ICT under test is connected to a compatible ICT that supports video and a person communicates in sign language.  **2. Check** by observation whether the ICT under test provides a means for speaker identification for the sign language users once the start of signing has been indicated. |
| Result | Pass: Check 2 is true  Fail: Check 2 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met |

### C.6.6 Alternatives to video-based services (informative)

Clause 6.6 is informative only and contains no testable requirements.

### C.6.7 Total conversation provision

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT provides continuous bidirectional voice communication.  2. The ICT includes continuous bidirectional video communication.  3. The pre-conditions for the scenario you are testing within.  4. All tests in C.6.1, C.6.2 and C.6.5 have been performed and the results are available. |
| Procedure | 1. Check that the result of all checks in C.6.1, C.6.2 and C.6.5 did pass. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met  Not testable: Pre-condition 4 is not met |

## C.7 ICT with video capabilities

### C.7.1 Caption processing technology

#### C.7.1.1 Captioning playback

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT displays video with synchronized audio.  2. A video source that includes open [captions](#caption) is available. |
| Procedure | 1. Check that there is a mode of operation that allows the available [captions](#caption) to be displayed. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false Not applicable: Pre-condition 1 or 2 is not met |
| Type of assessment | Test 2 |
| Pre-conditions | 1. The ICT displays video with synchronized audio.  2. A video source that contains closed [captions](#caption) is available. |
| Procedure | **1. Check** that there is a mechanism that provides an ability to choose to display the captions. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

#### C.7.1.2 Captioning synchronization

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT displays video with synchronized audio.  2. The ICT has a mechanism to display [captions](#caption). |
| Procedure | **1. Check** that the mechanism to display the captions preserves the synchronization between the audio and corresponding captions within a tenth of a second of the time stamp of the caption, or the availability of the caption to the player if a live caption. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.7.1.3 Preservation of captioning

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT transmits converts or records video with synchronized audio. |
| Procedure | **1. Check** that the ICT preserves [caption](#caption) data such that it can be displayed in a manner consistent with clauses [7.1.1](#_7.1.1_Captioning_playback) and [7.1.2](#_7.2_Audio_description). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.7.1.4 Captions characteristics

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT displays video with synchronized audio.  2. The ICT displays [captions](#caption).  3. The captions under test are displayed as modifiable characters. |
| Procedure | **1. Check** that the ICT provides a way for the user to adapt the displayed characteristics of captions to their individual requirements. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met |

#### C.7.1.5 Spoken interlingual subtitles

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT displays video with synchronized audio.  2. The ICT provides [interlingual subtitles](#interlingualSubtitles).  3. The content of displayed interlingual subtitles is [programmatically determinable](#programmaticallyDeterminable). |
| Procedure | **1. Check** that there is a mode of operation to provide a spoken output of the available interlingual subtitles. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met |

### C.7.2 Audio description technology

#### C.7.2.1 Audio description playback

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT displays video with synchronized audio. |
| Procedure | **1.** Check that there is an explicit and separate mechanism for [audio description](#audioDescription).  **2.** Check that there is a mechanism to select and play the audio description to the default audio channel.  **3. Check** that the ICT enables the user to select and play several audio tracks. |
| Result | Pass: Check 1 and 2 are true or 1 is false and 3 is true  Fail: Check 1 is true and 2 is false or 1 is false and 3 is false  Not applicable: Pre-condition 1 is not met. |

#### C.7.2.2 Audio description synchronization

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT displays video with synchronized audio.  2. The ICT has a mechanism to play [audio description](#audioDescription). |
| Procedure | **1. Check** that the synchronization between the audio/visual content and the corresponding audio description is preserved. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.7.2.3 Preservation of audio description

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT transmits converts or records video with synchronized audio. |
| Procedure | **1. Check** that the ICT preserves [audio description](#audioDescription) data such that it can be played in a manner consistent with clauses [7.2.1](#_7.2.1_Audio_description) and [7.2.2](#_7.2.2_Audio_description). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

### C.7.3 User controls for captions and audio description

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT displays video with synchronized audio.  2. The ICT has control over the presentation of [subtitles](#subtitles) and [audio description](#audioDescription). |
| Procedure | **1. Check** that there is at least one [shortcut method](#shortcutmethod) to activate and deactivate the presentation of those subtitles and audio description that meets the requirements of the present document. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

## C.8 Hardware

### C.8.1 General

#### C.8.1.1 Generic requirements (informative)

Clause 8.1.1 is informative only and contains no testable requirements.

#### C.8.1.2 Standard connections

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, hardware.  2. It provides user input or output device connection points. |
| Procedure | 1. Check that one type of connection conforms to an industry standard non-proprietary format.  2. Check that one type of connection conforms to an industry standard non-proprietary format through the use of commercially available adapters. |
| Result | Pass: Check 1 or 2 is true  Fail: Checks 1 and 2 are false  Not applicable: Pre-condition 1 or 2 is not met. |
| Note: The connections may be physical or wireless connections. | |

#### C.8.1.3 Colour

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, hardware.  2. Colour coding is used to convey visual information, to indicate an action, to prompt a response, or to distinguish a visual element. |
| Procedure | 1. Check that an alternative form of visual coding is provided. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

### C.8.2 Hardware products with speech output

#### C.8.2.1 Speech volume gain

##### C.8.2.1.1 Speech volume range

|  |  |
| --- | --- |
| Type of assessment | Inspection based on measurement data |
| Pre-conditions | 1. The ICTis, or includes, hardware.  2. The ICT has speech output. |
| Procedure | 1. Check that the ICT is certified to meet ANSI/TIA-4965 [i.2].  2. Measure the level (in dB) of the speech output at the lowest volume setting.  3. Measure the level (in dB) of the speech output at the highest volume setting.  4. Check that the range between 1 and 2 is greater than or equal to 18 dB. |
| Result | Pass: Check 1 or 4 is true  Fail: Check 1 and 4 are false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.8.2.1.2 Incremental volume control

|  |  |
| --- | --- |
| Type of assessment | Inspection based on measurement data |
| Pre-conditions | 1. The ICT is, or includes, hardware.  2. The ICT has speech output.  3. The volume control is incremental. |
| Procedure | 1. Measure the level (in dB) of the speech output at the lowest volume setting.  2. Check if one intermediate step provides a level 12 dB above the lowest volume level measured in step 1. |
| Result | Pass: Check 2 is true  Fail: Check 2 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met |

#### C.8.2.2 Magnetic coupling

##### C.8.2.2.1 Fixed-line devices

|  |  |
| --- | --- |
| Type of assessment | Inspection based on measurement data |
| Pre-conditions | 1. The ICT is , or includes, hardware.  2. The ICT is a fixed line communication device with an audio output that is normally held to the ear. |
| Procedure | 1. Check that the ICT is certified to meet TIA-1083-A [i.24].  2. Measurements are made according to ETSI ES 200 381-1 [2] which prove that the requirements defined in that standard are fulfilled.  3. The ICT carries the "T" symbol specified in ETSI ETS 300 381 [1]. |
| Result | Pass: Check 1 or 2 is true and check 3 is true  Fail: Checks 1 and 2 are false or check 3 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.8.2.2.2 Wireless communication devices

|  |  |
| --- | --- |
| Type of assessment | Inspection based on measurement data |
| Pre-conditions | 1. The ICT is, or includes, hardware.  2. The ICT is a wireless communication device which is normally held to the ear. |
| Procedure | 1. Check that the ICT is certified to meet ANSI/IEEE C63.19 [i.1].  2. Check that the ICT provide a means of magnetic coupling to hearing technologies which meets the requirements of ETSI ES 200 381-2 [3]. |
| Result | Pass: Check 1 or 2 is true  Fail: Checks 1 and 2 are false  Not applicable: Pre-condition 1 or 2 is not met. |

### C.8.3 Stationary ICT

#### C.8.3.0 General (informative)

Clause 8.3.0 is informative only and contains no testable requirements.

#### C.8.3.1 Forward or side reach

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT). |
| Procedure | 1. Check whether the ICT conforms to clause 8.3.2.  2. Check whether the ICT conforms to clause 8.3.3. |
| Result | Pass: Check 1 or 2 is true  Fail: Checks 1 and 2 are false  Not applicable: Pre-condition 1 is not met. |

#### C.8.3.2 Forward reach

##### C.8.3.2.1 Unobstructed forward reach for operable parts

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. No part of the stationary ICT obstructs the forward reach. |
| Procedure | 1. Check that at least one of each type of operable part is located between 800 and 1 100 mm above the floor of the access space at a horizontal distance of 450 mm from the forward-most reference point shown in [Figure 8.1](#FIG_8_1). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

##### C.8.3.2.2 Forward reach display location

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT). |
| Procedure | 1. Check that all displays are located between 800 mm and 1 600 mm above the floor of the access space. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

##### C.8.3.2.3 Obstructed forward reach

###### C.8.3.2.3.1 Clear space

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. An integral part of the stationary ICT forms an obstruction which hinders to any type of operable part. |
| Procedure | 1. Check that the stationary hardware provides a clear space which extends beneath the obstructing element for a distance not less than the required reach depth over the obstruction. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

###### C.8.3.2.3.2 Obstructed forward reach range

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. An integral part of the ICT forms an obstruction which is less than 400 mm deep. |
| Procedure | 1. Check that the forward reach to at least one of each type of [operable part](#operablePart) is no higher than 1 100 mm and no lower than 800 mm above the floor contact of the ICT. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |



































#### C.8.3.3 Side reach

##### C.8.3.3.1 Unobstructed high and low side reach

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. Side reach is unobstructed or is obstructed by an element that is an integral part of the stationary ICT. |
| Procedure | 1. Check that the reach to at least one of each type of operable part is between 800 mm and 1 100 mm above the floor of the [access space](#accessspace), at a horizontal distance of a maximum of 400 mm from the lateral-most point of the mobility device (as illustrated in [Figure 8.4](#FIG_8_4)). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |



##### C.8.3.3.2 Obstructed side reach

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. The ICT has an obstruction that is an integral part of the ICT. |
| Procedure | 1. Check that the height of the obstruction is less than 800mm above the floor of the [access space](#accessspace).  2. Check that the depth of the obstruction is less than 400mm.  3. Check that the obstructed high reach to at least one of each type of operable part is no higher than 1 100 mm above the floor of the [access space](#accessspace). |
| Result | Pass: Check 1 AND Check 2 AND Check 3 is true  Fail: Check 1 OR Check 2 OR Check 3 is false  Not applicable: Pre-condition 1 or 2 is not met |



#### C.8.3.4 Knee and toe clearance

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. The ICT has an obstacle that is an integral part of the ICT.  3. The space under the obstacle is part of the [access space](#accessspace). |
| Procedure | 1. Check that the clearance is at least 900 mm wide.  2. Check that the knee clearance height is at least 700 mm, measured vertically from floor of the [access space](#accessspace).  3. The toe space clearance height shall be at least 350 mm, measured vertically from floor of the [access space](#accessspace).  4. Check that the knee space depth is no more than 300mm.  5. Check that the toes space depth is not more than 100mm, measured horizontally from the forward-most reference point shown in [Figure 8.6](#FIG_8_6). |
| Result | Pass: Check 1 AND Check 2 AND Check 3 AND Check 4 AND Checck 5 is true  Fail: Check 1 OR Check 2 OR Check 3 OR Check 4 OR Check 5 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met |

#### C.8.3.5 Floor or ground space

##### C.8.3.5.1 Change in level

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. The ICT has a floor within it. |
| Procedure | 1. Check whether there is a vertical change in level.  2. Check that any vertical change in level is less than or equal to 6,4mm.  3. Check whether there is any sloped change in level.  4. Check that any sloped change in level is less than or equal to 13mm.  5. Check that any sloped level change has a slope that is not steeper than 1:2. |
| Result | Pass: Check 1 AND Check 2 are true OR Check 3 AND Check 4 AND Check 5 are true  Fail: Check 1 is true AND Check 2 is false OR Check 3 is true AND Check 4 OR Check 5 are false  Not applicable: Pre-condition 1 or 2 is not met |

##### C.8.3.5.2 Clear floor or ground space

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. The ICT has an operating area that is inside a space bounded on 3 sides within the ICT.  3. The space is deeper than 250 mm.  4. A forward approach is needed to access the ICT. |
| Procedure | 1. Check that the width of the access space is at least 900mm. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 OR 2 OR 3 OR 4 is not met |

##### C.8.3.5.3.3 Approach

Clause 8.3.5.3 contains no requirements.

##### C.8.3.5.3.1 General

Clause 8.3.5.3.1 is informative only and contains no testable requirements.

###### C.8.3.5.3.2 Forward Approach

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. The operating area is within a space bounded on 3 sides within the ICT.  3. The depth of the a space bounded on 3 sides is greater than 610 mm.  4. A forward approach is necessary. |
| Procedure | 1. Check that the width of the a space bounded on 3 sides is greater than 915 mm. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1, 2, 3 or 4 is not met |

###### C.8.3.5.3.3 Parallel Approach

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. The ICT ihas an operating area that is inside a space bounded on 3 sides within the ICT.  3. The depth of the a space bounded on 3 sides is greater than 250 mm.  4. A parallel approach is possible. |
| Procedure | 1. Check that the width of the [access space](#accessspace) is greater than 2 000 mm. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1, 2, 3 or 4 is not met |

#### C.8.3.6 Legibility

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT).  2. One or more display screens are provided. |
| Procedure | 1. Check that at least one of each type of display screen is positioned such that the information on the screen is legible from points located between 1 015 mm and 1 760 above the centre of the floor of the operating area. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |

#### C.8.3.6 Installation instructions

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. The ICT is, or includes, [stationary hardware](#stationaryHardwareICT). |
| Procedure | 1. Check that installation instructions are made available.  2. Check that the instructions give guidance on how to install the ICT in a manner that take into account [applicable requirements](#applicablerequirement) for [accessibility](#accessibility) of the built environment as they apply to the installation of the ICT. |
| Result | Pass: Checks 1 and 2 are true  Fail: Checks 1 or 2 are false  Not applicable: Pre-condition 1 is not met. |
| Note: In Europe, the [applicable requirements](#applicablerequirement) for [accessibility](#accessibility) of the built environment are contained in EN 17210 [i.66]. | |

### C.8.4 Mechanically operable parts

#### C.8.4.1 Numeric keys

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. Where ICT is, or includes, hardware.  2. The ICT has physical numeric keys arranged in a 12-key telephone keypad layout. |
| Procedure | 1. Check that the number five key is tactilely distinct from the other keys of the keypad. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.8.4.2 Operation of mechanical parts

##### C.8.4.2.1 Means of operation of mechanical parts

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. Where ICT is, or includes, hardware.  2. The ICT has operable parts that requires grasping, pinching, or twisting of the wrist to operate. |
| Procedure | 1. Check that there is an accessible alternative means of operation that does not require these actions. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.8.4.2.2 Force of operation of mechanical parts

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. Where ICT is, or includes, hardware.  2. The ICT has a control which requires a force greater than 22,2 N to operate it. |
| Procedure | 1. Check that an accessible alternative means of operation is provided that requires a force less than or equal to 22,2 N. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.8.4.3 Keys, tickets and fare cards

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. Where ICT is, or includes, hardware.  2. The ICT provides keys, tickets or fare cards, and their orientation is important for further use. |
| Procedure | 1. Check that keys, tickets or fare cards have an orientation that is tactilely discernible. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

### C.8.5 Tactile indication of speech mode

|  |  |
| --- | --- |
| Type of assessment | Inspection and measurement |
| Pre-conditions | 1. Where ICT is, or includes, hardware.  2. The ICT is designed for shared use.  3. Speech output is available. |
| Procedure | 1. Check that a tactile indication of the means to initiate the speech mode of operation is provided. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met. |

## C.9 Web

### C.9.0 General (informative)

Clause 9.0 is informative only and contains no testable requirements.

### C.9.1 Perceivable

#### C.9.1.1 Text alternatives

##### C.9.1.1.1 Non-text content

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.1.1 Non-text content](https://www.w3.org/TR/WCAG22/" \l "non-text-content) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.1.1 Non-text content. |

#### C.9.1.2 Time-based media

##### C.9.1.2.1 Audio-only and video-only (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-only-and-video-only-prerecorded) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded). |

##### C.9.1.2.2 Captions (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "captions-prerecorded) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded). |

##### C.9.1.2.3 Audio description or media alternative (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-or-media-alternative-prerecorded) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded). |

##### C.9.1.2.4 Captions (live)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.2.4 Captions (Live)](https://www.w3.org/TR/WCAG22/" \l "captions-live) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.2.4 Captions (Live). |

##### C.9.1.2.5 Audio description (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-prerecorded) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded). |

#### C.9.1.3 Adaptable

##### C.9.1.3.1 Info and relationships

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.3.1 Info and Relationships](https://www.w3.org/TR/WCAG22/" \l "info-and-relationships) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.3.1 Info and Relationships. |

##### C.9.1.3.2 Meaningful sequence

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.3.2 Meaningful Sequence](https://www.w3.org/TR/WCAG22/" \l "meaningful-sequence) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.3.2 Meaningful Sequence. |

##### C.9.1.3.3 Sensory characteristics

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.3.3 Sensory Characteristics](https://www.w3.org/TR/WCAG22/" \l "sensory-characteristics) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.3.3 Sensory Characteristics. |

##### C.9.1.3.4 Orientation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.3.4 Orientation](https://www.w3.org/TR/WCAG22/" \l "orientation) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.3.4 Orientation. |

##### C.9.1.3.5 Identify input purpose

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose](https://www.w3.org/TR/WCAG22/" \l "identify-input-purpose) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose. |

#### C.9.1.4 Distinguishable

##### C.9.1.4.1 Use of colour

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.1 Use of Color](https://www.w3.org/TR/WCAG22/" \l "use-of-color) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.1 Use of Color. |

##### C.9.1.4.2 Audio control

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.2 Audio Control](https://www.w3.org/TR/WCAG22/" \l "audio-control) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.2 Audio Control. |

##### C.9.1.4.3 Contrast (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.3 Contrast (Minimum)](https://www.w3.org/TR/WCAG22/" \l "contrast-minimum) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.3 Contrast (Minimum). |

##### C.9.1.4.4 Resize text

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.4 Resize text](https://www.w3.org/TR/WCAG22/" \l "resize-text) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.4 Resize text. |

##### C.9.1.4.5 Images of text

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.5 Images of Text](https://www.w3.org/TR/WCAG22/" \l "images-of-text) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.5 Images of Text. |

##### C.9.1.4.6 Void

##### C.9.1.4.7 Void

##### C.9.1.4.8 Void

##### C.9.1.4.9 Void

##### C.9.1.4.10 Reflow

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.10 Reflow](https://www.w3.org/TR/WCAG22/" \l "reflow) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.10 Reflow. |

##### C.9.1.4.11 Non-text contrast

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.11 Non-text Contrast](https://www.w3.org/TR/WCAG22/" \l "non-text-contrast) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.11 Non-text Contrast. |

##### C.9.1.4.12 Text spacing

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.12 Text spacing](https://www.w3.org/TR/WCAG22/" \l "text-spacing) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.12 Text spacing. |

##### C.9.1.4.13 Content on hover or focus

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 1.4.13 Content on Hover or Focus](https://www.w3.org/TR/WCAG22/" \l "content-on-hover-or-focus) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 1.4.13 Content on Hover or Focus. |

### C.9.2 Operable

#### C.9.2.1 Keyboard accessible

##### C.9.2.1.1 Keyboard

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.1.1 Keyboard](https://www.w3.org/TR/WCAG22/" \l "keyboard) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.1.1 Keyboard. |

##### C.9.2.1.2 No keyboard trap

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.1.2 No Keyboard Trap](https://www.w3.org/TR/WCAG22/" \l "no-keyboard-trap) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.1.2 No Keyboard Trap. |

##### C.9.2.1.3 Void

##### C.9.2.1.4 Character key shortcuts

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts](https://www.w3.org/TR/WCAG22/" \l "character-key-shortcuts) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts. |

#### C.9.2.2 Enough time

##### C.9.2.2.1 Timing adjustable

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.2.1 Timing Adjustable](https://www.w3.org/TR/WCAG22/" \l "timing-adjustable) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.2.1 Timing Adjustable. |

##### C.9.2.2.2 Pause, stop, hide

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.2.2 Pause, Stop, Hide](https://www.w3.org/TR/WCAG22/" \l "pause-stop-hide) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.2.2 Pause, Stop, Hide. |

#### C.9.2.3 Seizures and physical reactions

##### C.9.2.3.1 Three flashes or below threshold

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.3.1 Three Flashes or Below Threshold](https://www.w3.org/TR/WCAG22/" \l "three-flashes-or-below-threshold) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.3.1 Three Flashes or Below Threshold. |

#### C.9.2.4 Navigable

##### C.9.2.4.1 Bypass blocks

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.4.1 Bypass Blocks](https://www.w3.org/TR/WCAG22/" \l "bypass-blocks) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.4.1 Bypass Blocks. |

##### C.9.2.4.2 Page titled

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.4.2 Page Titled](https://www.w3.org/TR/WCAG22/" \l "page-titled) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.4.2 Page Titled. |

##### C.9.2.4.3 Focus Order

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.4.3 Focus Order](https://www.w3.org/TR/WCAG22/" \l "focus-order) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.4.3 Focus Order. |

##### C.9.2.4.4 Link purpose (in context)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context)](https://www.w3.org/TR/WCAG22/" \l "link-purpose-in-context) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context). |

##### C.9.2.4.5 Multiple ways

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.4.5 Multiple Ways](https://www.w3.org/TR/WCAG22/" \l "multiple-ways) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.4.5 Multiple Ways. |

##### C.9.2.4.6 Headings and labels

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.4.6 Headings and Labels](https://www.w3.org/TR/WCAG22/" \l "headings-and-labels) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.4.6 Headings and Labels. |

##### C.9.2.4.7 Focus visible

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.4.7 Focus Visible](https://www.w3.org/TR/WCAG22/" \l "focus-visible) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.4.7 Focus Visible. |

##### C.9.2.4.8 Void

##### C.9.1.4.9 Void

##### C.9.1.4.10 Void

##### C.9.2.4.11 Focus not obscured (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.4.11 Focus not obscured (minimum)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-minimum) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.4.7 Focus Not Obscured (Minimum). |

#### C.9.2.5 Input modalities

##### C.9.2.5.1 Pointer gestures

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG22/" \l "pointer-gestures) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.5.1 Pointer Gestures. |

##### C.9.2.5.2 Pointer cancellation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.5.2 Pointer Cancellation](https://www.w3.org/TR/WCAG22/" \l "pointer-cancellation) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.5.2 Pointer Cancellation. |

##### C.9.2.5.3 Label in name

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.5.3 Label in Name](https://www.w3.org/TR/WCAG22/" \l "label-in-name) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.5.3 Label in Name. |

##### C.9.2.5.4 Motion actuation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.5.4 Motion Actuation](https://www.w3.org/TR/WCAG22/" \l "motion-actuation) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.5.4 Motion Actuation. |

##### C.9.2.5.5 Void

##### C.9.2.5.6 Void

##### C.9.2.5.7 Dragging movements

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.5.7 Dragging Movements](https://www.w3.org/TR/WCAG22/" \l "dragging-movements) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.5.7 Dragging Movements. |

##### C.9.2.5.8 Target size (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 2.5.8 Target Size (Minimum)](https://www.w3.org/TR/WCAG22/" \l "target-size-minimum) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 2.5.8 Target Size (Minimum). |

### C.9.3 Understandable

#### C.9.3.1 Readable

##### C.9.3.1.1 Language of page

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.1.1 Language of Page](https://www.w3.org/TR/WCAG22/" \l "language-of-page) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.1.1 Language of Page. |

##### C.9.3.1.2 Language of parts

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.1.2 Language of Parts](https://www.w3.org/TR/WCAG22/" \l "language-of-parts) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.1.2 Language of Parts. |

#### C.9.3.2 Predictable

##### C.9.3.2.1 On focus

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.2.1 On Focus](https://www.w3.org/TR/WCAG22/" \l "on-focus) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.2.1 On Focus. |

##### C.9.3.2.2 On input

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.2.2 On Input](https://www.w3.org/TR/WCAG22/" \l "on-input) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.2.2 On Input. |

##### C.9.3.2.3 Consistent navigation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.2.3 Consistent Navigation](https://www.w3.org/TR/WCAG22/" \l "consistent-navigation) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.2.3 Consistent Navigation. |

##### C.9.3.2.4 Consistent identification

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.2.4 Consistent Identification](https://www.w3.org/TR/WCAG22/" \l "consistent-identification) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.2.4 Consistent Identification. |

##### C.9.3.2.5 Void

##### C.9.3.2.6 Consistent help

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.2.6 Consistent Help](https://www.w3.org/TR/WCAG22/" \l "consistent-help) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.2.6 Consistent Help. |

#### C.9.3.3 Input assistance

##### C.9.3.3.1 Error identification

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.3.1 Error Identification](https://www.w3.org/TR/WCAG22/" \l "error-identification) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.3.1 Error Identification. |

##### C.9.3.3.2 Labels or instructions

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions](https://www.w3.org/TR/WCAG22/" \l "labels-or-instructions) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions. |

##### C.9.3.3.3 Error suggestion

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.3.3 Error Suggestion](https://www.w3.org/TR/WCAG22/" \l "error-suggestion) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.3.3 Error Suggestion. |

##### C.9.3.3.4 Error prevention (legal, financial, data)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data)](https://www.w3.org/TR/WCAG22/" \l "error-prevention-legal-financial-data) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data). |

##### C.9.3.3.5 Void

##### C.9.3.3.6 Void

##### C.9.3.3.7 Redundant entry

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.3.7 Redundant Entry](https://www.w3.org/TR/WCAG22/" \l "redundant-entry) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.3.7 Redundant Entry. |

##### C.9.3.3.8 Accessible authentication (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-minimum) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum). |

### C.9.4 Robust

#### C.9.4.1 Compatible

##### C.9.4.1.1 Void

##### C.9.4.1.2 Name, role, value

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 4.1.2 Name, Role, Value](https://www.w3.org/TR/WCAG22/" \l "name-role-value) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 4.1.2 Name, Role, Value. |

##### C.9.4.1.3 Status messages

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page does not fail [WCAG 2.2 Success Criterion 4.1.3 Status Messages](https://www.w3.org/TR/WCAG22/" \l "status-messages) according to WCAG Conformance Requirements stated in [clause 9.6](#_9.6_WCAG_conformance). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the web page does not contain content relevant to WCAG 2.2 Success Criterion 4.1.3 Status Messages. |

### C.9.5 WCAG 2.2 AAA Success Criteria (informative)

Clause 9.5 is informative only and contains no testable requirements.

### C.9.6 WCAG 2.2 conformance requirements

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a web page. |
| Procedure | 1. Check that the web page satisfies WCAG 2.2 [4] conformance requirement "1: Conformance level" at Level AA.  2. Check that the web page satisfies WCAG 2.2 [4] conformance requirement "2: Full pages".  3. Check that the web page satisfies WCAG 2.2 [4] conformance requirement "3: Complete processes".  4. Check that the web page satisfies WCAG 2.2 [4] conformance requirement "4: Only Accessibility-Supported Ways of Using Technologies".  5. Check that the web page satisfies WCAG 2.2 [4] conformance requirement "5: Non-interference". |
| Result | Pass: All checks are true  Fail: Any check is false  Not applicable: Pre-condition 1 is not met. |

## C.10 Non-web documents

### C.10.0 General (informative)

Clause 10.0 is informative only and contains no testable requirements.

### C.10.1 Perceivable

#### C.10.1.1 Text alternatives

##### C.10.1.1.1 Non-text content

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.1.1 Non-text content](https://www.w3.org/TR/WCAG22/" \l "non-text-content). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.1.1 Non-text content. |

#### C.10.1.2 Time-based media

##### C.10.1.2.1 Audio-only and video-only (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-only-and-video-only-prerecorded). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded). |

##### C.10.1.2.2 Captions (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "captions-prerecorded). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded). |

##### C.10.1.2.3 Audio description or media alternative (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-or-media-alternative-prerecorded). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded). |

##### C.10.1.2.4 Captions (live)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.2.4 Captions (Live)](https://www.w3.org/TR/WCAG22/" \l "captions-live). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.2.4 Captions (Live). |

##### C.10.1.2.5 Audio description (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-prerecorded). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded). |

#### C.10.1.3 Adaptable

##### C.10.1.3.1 Info and relationships

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.3.1 Info and Relationships](https://www.w3.org/TR/WCAG22/" \l "info-and-relationships). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.3.1 Info and Relationships. |

##### C.10.1.3.2 Meaningful sequence

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.3.2 Meaningful Sequence](https://www.w3.org/TR/WCAG22/" \l "meaningful-sequence). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence. |

##### C.10.1.3.3 Sensory characteristics

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.3.3 Sensory Characteristics](https://www.w3.org/TR/WCAG22/" \l "sensory-characteristics). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics. |

##### C.10.1.3.4 Orientation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.3.4 Orientation](https://www.w3.org/TR/WCAG22/" \l "orientation). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.3.4 Orientation. |

##### C.10.1.3.5 Identify input purpose

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose](https://www.w3.org/TR/WCAG22/" \l "identify-input-purpose). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose. |

#### C.10.1.4 Distinguishable

##### C.10.1.4.1 Use of colour

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.4.1 Use of Color](https://www.w3.org/TR/WCAG22/" \l "use-of-color). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.4.1 Use of Color. |

##### C.10.1.4.2 Audio control

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.1](#TAB_10_1). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.1.4.3 Contrast (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.4.3 Contrast (Minimum)](https://www.w3.org/TR/WCAG22/" \l "contrast-minimum). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met.or the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum). |

##### C.10.1.4.4 Resize text

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.4.4 Resize text](https://www.w3.org/TR/WCAG22/" \l "resize-text). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.4.4 Resize text. |

##### C.10.1.4.5 Images of text

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.4.5 Images of Text](https://www.w3.org/TR/WCAG22/" \l "images-of-text). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.4.5 Images of Text. |

##### C.10.1.4.6 Void

##### C.10.1.4.7 Void

##### C.10.1.4.8 Void

##### C.10.1.4.9 Void

##### C.10.1.4.10 Reflow

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.2](#TAB_10_2). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.1.4.11 Non-text contrast

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument) that does not have a fixed size content layout area that is essential to the information being conveyed. |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.4.11 Non-text Contrast](https://www.w3.org/TR/WCAG22/" \l "non-text-contrast). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast. |

##### C.10.1.4.12 Text spacing

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.4.12 Text spacing](https://www.w3.org/TR/WCAG22/" \l "text-spacing). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 1.4.12 Text spacing. |

##### C.10.1.4.13 Content on hover or focus

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 1.4.13 Content on Hover or Focus](https://www.w3.org/TR/WCAG22/" \l "content-on-hover-or-focus). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 1.4.13 Content on Hover or Focus. |

### C.10.2 Operable

#### C.10.2.1 Keyboard accessible

##### C.10.2.1.1 Keyboard

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.1.1 Keyboard](https://www.w3.org/TR/WCAG22/" \l "keyboard). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not metor the non-web document does not contain content relevant to WCAG 2.1 Success Criterion 2.1.1 Keyboard. |

##### C.10.2.1.2 No keyboard trap

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a non-web document. |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.3](#TAB_10_3). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.2.1.3 Void

##### C.10.2.1.4 Character key shortcuts

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts](https://www.w3.org/TR/WCAG22/" \l "character-key-shortcuts). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts. |

#### C.10.2.2 Enough time

##### C.10.2.2.1 Timing adjustable

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.4](#TAB_10_4). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.2.2.2 Pause, stop, hide

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.5](#TAB_10_5). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG |

#### C.10.2.3 Seizures and physical reactions

##### C.10.2.3.1 Three flashes or below threshold

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.6](#TAB_10_6). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.10.2.4 Navigable

##### C.10.2.4.1 Void

##### C.10.2.4.2 Document titled

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.7](#TAB_10_7). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.2.4.3 Focus order

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.8](#TAB_10_8). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.2.4.4 Link purpose (in context)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context)](https://www.w3.org/TR/WCAG22/" \l "link-purpose-in-context). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context). |

##### C.10.2.4.5 Void

##### C.10.2.4.6 Headings and labels

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.4.6 Headings and Labels](https://www.w3.org/TR/WCAG22/" \l "headings-and-labels). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 2.4.6 Headings and Labels. |

##### C.10.2.4.7 Focus visible

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.4.7 Focus Visible](https://www.w3.org/TR/WCAG22/" \l "focus-visible). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 2.4.7 Focus Visible. |

##### C.10.2.4.8 Void

##### C.10.2.4.9 Void

##### C.10.2.4.10 Void

##### C.10.2.4.11 Focus not obscured (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.4.11 Focus Not Obscured (Minimum)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-minimum). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to [WCAG 2.2 Success Criterion 2.4.11 Focus Not Obscured (Minimum)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-minimum). |

#### C.10.2.5 Input modalities

##### C.10.2.5.1 Pointer gestures

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.9](#TAB_10_9). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.2.5.2 Pointer cancellation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the success criterion in [Table 10.10](#TAB_10_10). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.2.5.3 Label in name

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.5.3 Label in Name](https://www.w3.org/TR/WCAG22/" \l "label-in-name). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 2.5.3 Label in Name. |

##### C.10.2.5.4 Motion actuation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.5.4 Motion Actuation](https://www.w3.org/TR/WCAG22/" \l "motion-actuation). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 2.5.4 Motion Actuation. |

##### C.10.2.5.5 Void

##### C.10.2.5.6 Void

##### C.10.2.5.7 Dragging movements

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.5.7 Dragging Movements](https://www.w3.org/TR/WCAG22/" \l "dragging-movements). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to [WCAG 2.2 Success Criterion 2.5.7 Dragging Movements](https://www.w3.org/TR/WCAG22/" \l "dragging-movements). |

##### C.10.2.5.8 Target size (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 2.5.8 Target Size (Minimum)](https://www.w3.org/TR/WCAG22/" \l "target-size-minimum). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to [WCAG 2.2 Success Criterion 2.5.8 Target Size (Minimum)](https://www.w3.org/TR/WCAG22/" \l "target-size-minimum). |

### C.10.3 Understandable

#### C.10.3.1 Readable

##### C.10.3.1.1 Language of document

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.11](#TAB_10_11). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.3.1.2 Language of parts

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.12](#TAB_10_12). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.10.3.2 Predictable

##### C.10.3.2.1 On focus

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 3.2.1 On Focus](https://www.w3.org/TR/WCAG22/" \l "on-focus). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 3.2.1 On Focus. |

##### C.10.3.2.2 On input

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 3.2.2 On Input](https://www.w3.org/TR/WCAG22/" \l "on-input). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to [WCAG 2.2 Success Criterion 3.2.2 On Input](https://www.w3.org/TR/WCAG22/" \l "on-input). |

##### C.10.3.2.3 Void

##### C.10.3.2.4 Void

##### C.10.3.2.5 Void

##### C.10.3.2.6 Consistent help

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 3.2.6 Consistent Help](https://www.w3.org/TR/WCAG22/" \l "consistent-help). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to [WCAG 2.2 Success Criterion 3.2.6 Consistent Help](https://www.w3.org/TR/WCAG22/" \l "consistent-help). |

#### C.10.3.3 Input assistance

##### C.10.3.3.1 Error identification

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 3.3.1 Error Identification](https://www.w3.org/TR/WCAG22/" \l "error-identification). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 3.3.1 Error Identification. |

##### C.10.3.3.2 Labels or instructions

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions](https://www.w3.org/TR/WCAG22/" \l "labels-or-instructions). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions. |

##### C.10.3.3.3 Error suggestion

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 3.3.3 Error Suggestion](https://www.w3.org/TR/WCAG22/" \l "error-suggestion). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 3.3.3 Error Suggestion |

##### C.10.3.3.4 Error prevention (legal, financial, data)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.13](#TAB_10_13). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.3.3.5 Void

##### C.10.3.3.6 Void

##### C.10.3.3.7 Redundant entry

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 3.3.7 Redundant Entry](https://www.w3.org/TR/WCAG22/" \l "redundant-entry). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to [WCAG 2.2 Success Criterion 3.3.7 Redundant Entry](https://www.w3.org/TR/WCAG22/" \l "redundant-entry) |

##### C.10.3.3.8 Accessible authentication (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-minimum). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to [WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-minimum) |

### C.10.4 Robust

#### C.10.4.1 Compatible

##### C.10.4.1.1 Void

Earlier versions of the present document referenced the 4.1.1 Parsing success criterion from WCAG 2.0 [i.41] and WCAG 2.1 [i.42]. In WCAG 2.2 [4], this criterion has been removed, because the accessibility problems it was intended to prevent “either no longer exist or are addressed by other criteria”.



##### C.10.4.1.2 Name, role, value

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail the Success Criterion in [Table 10.14](#TAB_10_14). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.10.4.1.3 Status messages

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, a [non-web document](#NonWebDocument). |
| Procedure | 1. Check that the document does not fail [WCAG 2.2 Success Criterion 4.1.3 Status Messages](https://www.w3.org/TR/WCAG22/" \l "status-messages). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web document does not contain content relevant to WCAG 2.2 Success Criterion 4.1.3 Status Messages. |

### C.10.5 Caption positioning (informative)

Clause 10.5 is informative only and contains no testable requirements.

### C.10.6 Audio description timing (informative)

Clause 10.6 is informative only and contains no testable requirements.

## C.11 Software

### C.11.0 General (informative)

Clause 11.0 is informative only and contains no testable requirements.

### C.11.1 Perceivable

#### C.11.1.1 Text alternatives

##### C.11.1.1.1 Non-text content (was C.11.1.1.1.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software includes functionality that is not closed to programmatic access of information by assistive technologies. |
| Procedure | 1. Check that the functionality that is not closed does not fail [WCAG 2.2 Success Criterion 1.1.1 Non-text Content](https://www.w3.org/TR/WCAG22/" \l "non-text-content). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.11.1.2 Time-based media

##### C.11.1.2.1 Audio-only and video-only (pre-recorded) (was C.11.1.2.1.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software includes functionality that is not closed to programmatic access of information by assistive technologies. |
| Procedure | 1. Check that functionality that is not closed does not fail [WCAG 2.2 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-only-and-video-only-prerecorded). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.1.2.2 Captions (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "captions-prerecorded). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.2.2 Captions (Prerecorded). |

##### C.11.1.2.3 Audio description or media alternative (pre-recorded) (was C.11.1.2.3.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software includes functionality that is not closed to programmatic access of information by assistive technologies. |
| Procedure | 1. Check that functionality that is not closed does not fail [WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-or-media-alternative-prerecorded). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded). |

##### C.11.1.2.4 Captions (live)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.2.4 Captions (Live)](https://www.w3.org/TR/WCAG22/" \l "captions-live). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.2.4 Captions (Live). |

##### C.11.1.2.5 Audio description (pre-recorded)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded)](https://www.w3.org/TR/WCAG22/" \l "audio-description-prerecorded). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.2.5 Audio Description (Prerecorded). |

#### C.11.1.3 Adaptable

##### C.11.1.3.1 Info and relationships (was C.11.1.3.1.1)

|  |  |  |
| --- | --- | --- |
| Type of assessment | Inspection | |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software includes functionality that is not closed to programmatic access of information by assistive technologies. | |
| Procedure | 1. Check that the functionality that is not closed does not fail [WCAG 2.2 Success Criterion 1.3.1 Info and Relationships](https://www.w3.org/TR/WCAG22/" \l "info-and-relationships). | |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. | |
| Note: There are a number of tests that address different aspects of a user interface object and their relationships. Any of these will also cause C.11.1.3.1 to fail. It is recommended therefore to evaluate them first (or as part of the C.11.1.3.1 evaluation) to save time. The requirements are C.11.5.2.6, C.11.5.2.8, C.11.5.2.9, and C.11.5.2.15. | |

##### C.11.1.3.2 Meaningful sequence (was C.11.1.3.2.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software includes functionality that is not closed to programmatic access of information by assistive technologies. |
| Procedure | 1. Check that functionality that is not closed does not fail [WCAG 2.2 Success Criterion 1.3.2 Meaningful Sequence](https://www.w3.org/TR/WCAG22/" \l "meaningful-sequence). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.1.3.3 Sensory characteristics

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.3.3 Sensory Characteristics](https://www.w3.org/TR/WCAG22/" \l "sensory-characteristics). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.3.3 Sensory Characteristics. |

##### C.11.1.3.4 Orientation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.3.4 Orientation](https://www.w3.org/TR/WCAG22/" \l "orientation). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.3.4 Orientation. |

##### C.11.1.3.5 Identify input purpose (was C.11.1.3.5.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software includes functionality that is not closed to programmatic access of information by assistive technologies. |
| Procedure | 1. Check that the functionality that is not closed does not fail [WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose](https://www.w3.org/TR/WCAG22/" \l "identify-input-purpose). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.3.5 Identify Input Purpose. |

#### C.11.1.4 Distinguishable

##### C.11.1.4.1 Use of colour

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.4.1 Use of Color](https://www.w3.org/TR/WCAG22/" \l "use-of-color). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.4.1 Use of Color. |

##### C.11.1.4.2 Audio control

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.1](#TAB_11_1). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.11.1.4.3 Contrast (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.4.3 Contrast (Minimum)](https://www.w3.org/TR/WCAG22/" \l "contrast-minimum). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.4.3 Contrast (Minimum). |

##### C.11.1.4.4 Resize text (was C.11.1.4.4.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to enlargement features of the [platform](#platformSoftware) or [assistive technology](#assistiveTechnology). |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.4.4 Resize text](https://www.w3.org/TR/WCAG22/" \l "resize-text). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.4.4 Resize text. |
| Result | Pass: Check 2 is true  Fail: Check 2 is false  Not applicable: Pre-condition 1, 2 or 3 is not met. |

##### C.11.1.4.5 Images of text (was C.11.1.4.5.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software includes functionality that is not closed to programmatic access of information by assistive technologies. |
| Procedure | 1. Check that the functionality that is not closed does not fail [WCAG 2.2 Success Criterion 1.4.5 Images of Text](https://www.w3.org/TR/WCAG22/" \l "images-of-text). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.4.5 Images of Text. |

##### C.11.1.4.6 Void

##### C.11.1.4.7 Void

##### C.11.1.4.8 Void

##### C.11.1.4.9 Void

##### C.11.1.4.10 Reflow

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.2](#TAB_11_2). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.11.1.4.11 Non-text contrast

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion [WCAG 2.2 Success Criterion 1.4.11 Non-text Contrast](https://www.w3.org/TR/WCAG22/" \l "non-text-contrast). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.4.11 Non-text Contrast. |

##### C.11.1.4.12 Text spacing

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The content is implemented using markup languages  3. Users are allowed to modify text spacing properties |
| Procedure | 1. Check that the software does not fail the Success Criterion [WCAG 2.2 Success Criterion 1.4.12 Text spacing](https://www.w3.org/TR/WCAG22/" \l "text-spacing). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.4.12 Text spacing. |

##### C.11.1.4.13 Content on hover or focus

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. Any visual presentation of the additional content caused by a hover or focus is not controlled by the user agent or platform software.  3. Any visual presentation of the additional content caused by a hover or focus is not modified by the author. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 1.4.13 Content on hover or focus](https://www.w3.org/TR/WCAG22/" \l "content-on-hover-or-focus). |
| Result | Pass: Checks 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 or 3 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 1.4.13 Content on hover or focus. |

### C.11.2 Operable

#### C.11.2.1 Keyboard accessible

##### C.11.2.1.1 Keyboard (was C.11.2.1.1.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The ICT provides a keyboard or accepts input from a keyboard or keyboard interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.1.1 Keyboard](https://www.w3.org/TR/WCAG22/" \l "keyboard). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.1.1 Keyboard. |

##### C.11.2.1.2 No keyboard trap

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.3](#TAB_11_3). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.2.1.3 Void

##### C.11.2.1.4 Character key shortcuts (was C.11.2.1.4.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The ICT provides a keyboard or accepts input from a keyboard or keyboard interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts](https://w3c.github.io/wcag21/guidelines/" \l "character-key-shortcuts). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.1.4 Character Key Shortcuts. |

#### C.11.2.2 Enough time

##### C.11.2.2.1 Timing adjustable

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.4](#TAB_11_4). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.11.2.2.2 Pause, stop, hide

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.5](#TAB_11_5). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.11.2.3 Seizures and physical reactions

##### C.11.2.3.1 Three flashes or below threshold

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.6](#TAB_11_6). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.11.2.4 Navigable

##### C.11.2.4.1 Void

##### C.11.2.4.2 Void

##### C.11.2.4.3 Focus order

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.7](#TAB_11_7). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.11.2.4.4 Link purpose (in context)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context)](https://www.w3.org/TR/WCAG22/" \l "link-purpose-in-context). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.4.4 Link Purpose (In Context). |

##### C.11.2.4.5 Void

##### C.11.2.4.6 Headings and labels

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.4.6 Headings and Labels](https://www.w3.org/TR/WCAG22/" \l "headings-and-labels). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.4.6 Headings and Labels. |

##### C.11.2.4.7 Focus visible

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.4.7 Focus Visible](https://www.w3.org/TR/WCAG22/" \l "focus-visible). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.4.7 Focus Visible. |

##### C.11.2.4.8 Void

##### C.11.2.4.9 Void

##### C.11.2.4.10 Void

##### C.11.2.4.11 Focus not obscured (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.4.11 Focus not obscured (minimum)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-minimum). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to [WCAG 2.2 Success Criterion 2.4.11 Focus not obscured (minimum)](https://www.w3.org/TR/WCAG22/" \l "focus-not-obscured-minimum). |

#### C.11.2.5 Input modalities

##### C.11.2.5.1 Pointer gestures

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to at least one assistive technology. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.8](#TAB_11_8). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.2.5.2 Pointer cancellation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to at least one assistive technology. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.9](#TAB_11_9). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.2.5.3 Label in name (was C.11.2.5.3.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to at least one assistive technology. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.5.3 Label in Name](https://www.w3.org/TR/WCAG22/" \l "label-in-name). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.5.3 Label in Name. |

##### C.11.2.5.4 Motion actuation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to at least one assistive technology. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.5.4 Motion Actuation](https://www.w3.org/TR/WCAG22/" \l "motion-actuation). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.5.4 Motion Actuation. |

##### C.11.2.5.5 Void

##### C.11.2.5.6 Void

##### C.11.2.5.7 Dragging movements

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to at least one assistive technology. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.5.7 Dragging movements](https://www.w3.org/TR/WCAG22/" \l "concurrent-input-mechanisms). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.5.7 Dragging movements. |

##### C.11.2.5.8 Target size (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to at least one assistive technology. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 2.5.8 Target size (minimum)](https://www.w3.org/TR/WCAG22/" \l "target-size-minimum). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 2.5.8 Target size (minimum). |

### C.11.3 Understandable

#### C.11.3.1 Readable

##### C.11.3.1.1 Language of software (was C.11.3.1.1.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to assistive technologies for screen reading. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.10](#TAB_11_10). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.3.1.2 Void

#### C.11.3.2 Predictable

##### C.11.3.2.1 On focus

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 3.2.1 On Focus](https://www.w3.org/TR/WCAG22/" \l "on-focus). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 3.2.1 On Focus. |

##### C.11.3.2.2 On input

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 3.2.2 On Input](https://www.w3.org/TR/WCAG22/" \l "on-input). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 3.2.2 On Input. |

##### C.11.3.2.3 Void

##### C.11.3.2.4 Consistent identification

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that components that have the same functionality within the non-web software are identified consistently.  2. Where inconsistent identification of components is detected, check that this is because the inconsistency is essential to the function of the software. |
| Result | Pass: Check 1 is true and check 2 is true where inconsistencies are detected  Fail: Check 1 is false or check 2 is false where inconsistencies are detected  Not applicable: Pre-condition 1 is not met. |

##### C.11.3.2.5 Void

##### C.11.3.2.6 Void

#### C.11.3.3 Input assistance

##### C.11.3.3.1 Error identification (was C.11.3.3.1.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to assistive technologies for screen reading. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 3.3.1 Error Identification](https://www.w3.org/TR/WCAG22/" \l "error-identification). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 3.3.1 Error Identification. |

##### C.11.3.3.2 Labels or instructions

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions](https://www.w3.org/TR/WCAG22/" \l "labels-or-instructions). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 3.3.2 Labels or Instructions. |

##### C.11.3.3.3 Error suggestion

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 3.3.3 Error Suggestion](https://www.w3.org/TR/WCAG22/" \l "error-suggestion). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 3.3.3 Error Suggestion. |

##### C.11.3.3.4 Error prevention (legal, financial, data)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.11](#TAB_11_11). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.11.3.3.5 Void

##### C.11.3.3.6 Void

##### C.11.3.3.7 Redundant entry

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 3.3.7 Redundant Entry](https://www.w3.org/TR/WCAG22/" \l "redundant-entry). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the software does not contain content relevant to [WCAG 2.2 Success Criterion 3.3.7 Redundant Entry](https://www.w3.org/TR/WCAG22/" \l "redundant-entry) |

##### C.11.3.3.8 Accessible authentication (minimum)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-minimum). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met or the software does not contain content relevant to [WCAG 2.2 Success Criterion 3.3.8 Accessible Authentication (Minimum)](https://www.w3.org/TR/WCAG22/" \l "accessible-authentication-minimum) |

### C.11.4 Robust

#### C.11.4.1 Compatible

##### C.11.4.1.1 Void

Earlier versions of the present document referenced the 4.1.1 Parsing success criterion from WCAG 2.0 [i.41] and WCAG 2.1 [i.42]. In WCAG 2.2 [4], this criterion has been removed, because the accessibility problems it was intended to prevent “either no longer exist or are addressed by other criteria”.



##### C.11.4.1.2 Name, role, value (was C.11.4.1.2.1)

|  |  |  |
| --- | --- | --- |
| Type of assessment | Inspection | |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to at least one assistive technology. | |
| Procedure | 1. Check that the software does not fail the Success Criterion in [Table 11.12](#TAB_11_12). | |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. | |
| Note: There are a number of tests that address different aspects of a user interface object accessibility. Any of these will also cause C.11.4.1.2 to fail. It is recommended therefore to evaluate them first (or as part of the C.11.4.1.2 evaluation) to save time. The requirements are 11.5.2.5, 11.5.2.7, 11.5.2.10, 11.5.2.11, 11.5.2.13, and 11.5.2.15. | |

##### C.11.4.1.3 Status messages (was C.11.4.1.3.1)

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface.  2. The software provides support to assistive technologies. |
| Procedure | 1. Check that the software does not fail [WCAG 2.2 Success Criterion 4.1.3 Status messages](https://www.w3.org/TR/WCAG22/" \l "status-messages). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met, or the non-web software does not contain content relevant to WCAG 2.2 Success Criterion 4.1.3 Status messages |

### C.11.5 Interoperability with assistive technology

#### C.11.5.1 Closed functionality

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, non-web software that provides a user interface, and that software has [closed functionality](#closedFunctionality). |
| Procedure | 1. Check that the closed functionality conforms to clause 5.1. |
| Result | If check 1 is true, the software is not required to meet clause 11.5.2 to 11.5.2.17  If check 1 is false the software is required to meet clauses 11.5.2 to 11.5.2.17  Not applicable: Pre-condition 1 is not met. |

#### C.11.5.2 Accessibility services

##### C.11.5.2.1 Platform interoperability with assistive technologies

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [platform software](#platformSoftware). |
| Procedure | 1. Check that the platform provides a set of [documented platform accessibility services](#documentedplatformaccessibilityservice).  2. For each [user interface](#userInterface) concept corresponding to the clauses 11.5.2.5 to 11.5.2.17 supported within the platform software.  2.1 Check that the platform software documentation includes information about platform services that enable [assistive technology](#assistiveTechnology) to interoperate with software running on the platform. |
| Result | Pass: Check 1 and all checks 2.1 are true  Fail: Check 1 is false or any check 2.1 is false  Not applicable: Pre-condition 1 is not met. |



##### C.11.5.2.2 Void

Note: This clause from previous versions of the EN 301 549 has been merged in with clause 11.5.2.1.

##### C.11.5.2.3 Use of accessibility services (recommendation)

Clause 11.5.2.3 is informative only and contains no testable requirements.



##### C.11.5.2.4 Assistive technology

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [assistive technology](#assistiveTechnology). |
| Procedure | 1. Check that the [assistive technology](#assistiveTechnology) uses the [documented platform accessibility services](#documentedplatformaccessibilityservice). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.11.5.2.5 Object information

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface) . |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Check that the user interface element's role is programmatically determinable.  2. Check that the user interface element's state(s) is programmatically determinable.  3. Check that the user interface element's boundary is programmatically.  4. Check that the user interface element's name is programmatically determinable.  5. Check that the user interface element's description is programmatically determinable. |
| Result | Pass: Checks 1, 2, 3, 4 and 5 are true  Fail: Check 1 or 2 or 3 or 4 or 5 is false  Not applicable: Pre-condition 1 is not met. |

##### C.11.5.2.6 Row, column, and headers

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are data tables in the user interface. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Select a data table in which the tests are to be performed.  2. Check that each cell's row is programmatically determinable by the tool.  3. Check that each cell's column is programmatically determinable by the tool.  4. Check that each cell's row header, if the row header exists, is programmatically determinable by the tool.  5. Check that each cell's column header, if the column header exists, is programmatically determinable by the tool. |
| Result | Pass: Checks 2, 3, 4 and 5 are true  Fail: Check 2 or 3 or 4 or 5 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.5.2.7 Values

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are user interface elements that can have values. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Select a user interface element that can have a value.  2. Check that the current value is programmatically determinable by the tool.  3. If the user interface element conveys information about a range of values, check that the minimum value is programmatically determinable by the tool.  4. If the user interface element conveys information about a range of values, check that the maximum value is programmatically determinable by the tool. |
| Result | Pass: Checks 2, 3 and 4 are true  Fail: Check 2 or 3 or 4 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.5.2.8 Label relationships

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are user interface elements that are labels of other user interface elements. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Obtain the information of each user interface element.  2. Check that the user interface element's information includes the relationship with the user interface element that is its label, if the current user interface element has a label, and that this relationship is programmatically determinable by the tool.  3. Check that the user interface element's information includes the relationship with the user interface element that it is labelling, if the current user interface element is a label, and that this relationship is programmatically determinable by the tool. |
| Result | Pass: Checks 2 or 3 are true  Fail: Check 2 and 3 are false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.5.2.9 Parent-child relationships

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are user interface elements that are parents of other user interface elements in a hierarchical structure. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. For user interface elements that have a parent, check that the user interface element's information includes the relationship with the user interface element that is its parent.  2. Check that the user interface elements that are parents of the user interface element selected in check 1, include the relationship with the user interface elements that are its children in their information, and that this relationship is programmatically determinable by the tool.  3. For user interface elements that are a parent of other user interface elements, check that the user interface element's information includes the relationship with the user interface elements that are its children, and that this relationship is programmatically determinable by the tool.  4. Check that the user interface elements that are a child of the user interface element selected in check 3, include the relationship with the user interface elements that are its parents in their information, and that this relationship is programmatically determinable by the tool. |
| Result | Pass: Checks 1 or 2 is true and check 3 or 4 is true  Fail: Checks 1 and 2 are false or check 3 and 4 are false  Not applicable: Pre-condition 1 or 2 is not met. |
| Note: For this requirement it is enough that one of the two directions of a parent-child relationship is programmatically determinable. This is the reason why the requirement checks are in pairs and why the requirement is met if one member of each pair is true. | |

##### C.11.5.2.10 Text

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There is text rendered to the screen. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. For instances of text rendered to the screen, check that the text's information includes its text content, and that this information is programmatically determinable by the tool.  2. For instances of text rendered to the screen, check that the text's information includes its attributes, and that this information is programmatically determinable by the tool.  3. For instances of text rendered to the screen, check that the text's information includes its boundary, and that this information is programmatically determinable by the tool. |
| Result | Pass: Checks 1, 2 and 3 are true  Fail: Check 1 or 2 or 3 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.5.2.11 List of available actions

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface). |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. For all user interface elements that have executable actions.  1.1 Check that the list of actions of the user interface element is programmatically determinable by the tool . |
| Result | Pass: All checks 1.1 are true  Fail: Any check 1.1 is false  Not applicable: Pre-condition 1 is not met. |

##### C.11.5.2.12 Execution of available actions

|  |  |
| --- | --- |
| Type of assessment | Inspection and testing |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are user interface elements that have actions that can be executed by the user.  3. The security requirements permit assistive technology to programmatically execute user actions. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Check that the user interface element's information includes the list of actions that can be executed by assistive technologies according to 11.5.2.11.  2. Check that all the actions in the list can successfully be executed by by the tool. |
| Result | Pass: Checks 1 and 2 are true  Fail: Check 1 or 2 is false  Not applicable: Pre-condition 1, 2 or 3 is not met. |

##### C.11.5.2.13 Tracking of focus and selection attributes

|  |  |
| --- | --- |
| Type of assessment | Inspection and testing |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are user interface elements that enable text editing. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Check that the user interface element's information includes mechanisms to track focus, text insertion point and selection attributes.  2. Check that this information is programmatically determinable by the tool.  3. Activate those tracking mechanisms using the tool.  4. As a user, use the text editing functionality in the evaluated software product.  5. Check that the tracking of focus, text insertion point and selection attributes work. |
| Result | Pass: Checks 2 and 5 are true  Fail: Check 1 or 5 is false  Not applicable: Pre-condition 1 or 2 is not met. |

##### C.11.5.2.14 Modification of focus and selection attributes

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are user interface elements that can receive focus or that enable text editing.  3. The security requirements permit platform software to programmatically modify focus, text insertion point and selection attributes of user interface elements. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. For user interface elements that can receive focus and where the focus can be modified by a user without the use of assistive technology, check that the focus can be programmatically modified by the tool.  2. For user interface elements that enable text editing by a user without the use of assistive technology, check that the position of the text insertion point can be programmatically modified by the tool.  3. For user interface elements that enable text editing, check that the selection attributes can be programmatically modified by by the tool where they can be modified by user without the use of assistive technology. |
| Result | Pass: All checks are true  Fail: Any check is false  Not applicable: Pre-condition 1, 2 or 3 is not met. |

##### C.11.5.2.15 Change notification

|  |  |  |
| --- | --- | --- |
| Type of assessment | Inspection and testing | |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface). | |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Activate notifications of changes in the user interface elements.  2. Check that notifications about changes in object information (role, state, boundary, name and description) are sent to the tool, if this information changes in the software user interface.  3. Check that notifications about changes in row, column and headers of data tables are sent to the tool, if this information changes in the software.  4. Check that notifications about changes in values (current value, minimum value and maximum value) are sent to the tool, if this information changes in the software.  5. Check that notifications about changes in label relationships are sent to the tool, if this information changes in the software.  6. Check that notifications about changes in parent-child relationships are sent to the tool, if this information changes in the software.  7. Check notifications about changes in text (text contents, text attributes and the boundary of text rendered to the screen) are sent to the tool, if this information changes in the software.  8. Check that notifications about changes in the list of available actions are sent to the tool, if this information changes in the software.  9. Check that notifications about changes in focus, text insertion point and selection attributes are sent to to the tool, if this information changes in the software. | |
| Result | Pass: Checks 2, 3, 4, 5, 6, 7, 8 and 9 are true  Fail: Check 2, 3, 4, 5, 6, 7, 8 or 9 is false  Not applicable: Pre-condition 1 is not met. | |
| Note: C.11.5.2.15 evaluates whether software notifies assistive technologies about changes in those attributes of user interface elements that are referenced in requirements 11.5.2.5 to 11.5.2.11 and 11.5.2.13. It is recommended to evaluate notifications of changes in the attributes addressed respectively by C.11.5.2.5 to C.11.5.2.11 and C.11.5.2.13, and while testing respective changes, pay attention to corresponding notifications to collect the necessary evidence to build evidence to determine the conformance of 11.5.2.15 checks. | |

##### C.11.5.2.16 Modifications of states and properties

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are user interface elements whose state or properties can be modified by a user without the use of assistive technology.  3. The security requirements permit assistive technology to programmatically modify states and properties of user interface elements. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Check that the state of user interface elements, whose state can be modified by a user without the use of assistive technology, can be programmatically modified using the tool.  2. Check the properties of user interface elements, whose properties can be modified by a user without the use of assistive technologies, can be programmatically modified using the tool. |
| Result | Pass: All checks are true  Fail: Any check is false  Not applicable: Pre-condition 1, 2 or 3 is not met. |

##### C.11.5.2.17 Modifications of values and text

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. The ICT is, or includes, [non-web software](#nonWebSoftware) that provides a [user interface](#userInterface).  2. There are user interface elements whose values or text can be modified by a user without the use of assistive technology.  3. The security requirements permit assistive technology to programmatically modify values and text of user interface elements. |
| Procedure | Using an appropriate [accessibility inspection tool for platforms](#accessibilityinspectiontoolplatforms):  1. Check that the values of user interface elements, whose values can be modified by a user without the use of assistive technology, can be modified by the tool using the input methods of the platform.  2. Check that the text of user interface elements, whose text can be modified by a user without the use of assistive technology, can be modified by the tool using the input methods of the platform. |
| Result | Pass: all checks are true  Fail: any check is false  Not applicable: Pre-condition 1, 2 or 3 is not met. |

### C.11.6 Documented accessibility usage

#### C.11.6.1 User control of accessibility features

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. There are platform features that are defined in the platform documentation as accessibility features intended for users. |
| Procedure | 1. Check that sufficient modes of operation exists where user control over platform features, that are defined in the platform documentation as accessibility features intended for users, is possible. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.11.6.2 No disruption of accessibility features

|  |  |
| --- | --- |
| Type of assessment | Testing |
| Pre-conditions | 1. There are platform features that are defined in the platform documentation as accessibility features. |
| Procedure | 1. Check if software that provides a user interface disrupts normal operation of platform accessibility features.  2. Check if the disruption was specifically requested or confirmed by the user. |
| Result | Pass: Check 1 is false or both checks are true  Fail: Check 1 is true and check 2 is false  Not applicable: Pre-condition 1 is not met. |

### C.11.7 User preferences

|  |  |
| --- | --- |
| Type of assessment | Inspection and Testing |
| Pre-conditions | 1. The software is software that provides a user interface.  2. The software has settings for language, colour, contrast, font type, font size, or focus cursor, that correspond to platform settings.  3. The software is not designed to be isolated from its underlying platforms. |
| Procedure | 1. Check that the software provides a mode of operation that follows the platform settings. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1, 2 or 3 is not met. |

### C.11.8 Authoring tools

#### C.11.8.0 General (informative)

Clause 11.8.0 is informative only and contains no testable requirements.

#### C.11.8.1 Content technology

|  |  |
| --- | --- |
| Type of assessment | Inspection and Testing |
| Pre-conditions | 1. The software is or includes, [authoring tool](#authoringTool) functionality.  2. The output format of the authoring tool supports information required for accessibility. |
| Procedure | 1. Check if the authoring tool conforms to 11.8.2 to 11.8.5 to the extent that information required for accessibility is supported by the format used for the output of the authoring tool. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met |
| Note: Where the output format of the authoring tool does not support certain types of information required for accessibility, conformance with requirements that relate to that type of information is not required. | |

#### C.11.8.2 Accessible content creation

|  |  |
| --- | --- |
| Type of assessment | Inspection and Testing |
| Pre-conditions | 1. The software is, or includes, [authoring tool](#authoringTool) functionality. |
| Procedure | 1. Check if the authoring tool has features that enable and guide the production of content that conforms to clauses 9 (Web) and 10 (Non-web documents). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.11.8.3 Preservation of accessibility information in transformations

|  |  |
| --- | --- |
| Type of assessment | Inspection and Testing |
| Pre-conditions | 1. The software is, or includes, [authoring tool](#authoringTool) functionality.  2. The authoring tool provides restructuring transformations or re-coding transformations. |
| Procedure | 1. For a restructuring transformation, check if the accessibility information is preserved in the output.  2. For a restructuring transformation, check if the content technology supports accessibility information for the restructured form of the information.  3. For a re-coding transformation, check if the accessibility information is preserved in the output.  4. For a re-coding transformation, check if the accessibility information is supported by the technology of the re-coded output. |
| Result | Pass: (Check 1 is true or checks 1 and 2 are false) **and** (check 3 is true or checks 3 and 4 are false)  Fail: (Check 1 is false and check 2 is true) **or** (check 3 is false and check 4 is true)  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.11.8.4 Repair assistance

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The software is, or includes, [authoring tool](#authoringTool) functionality.  2. The accessibility checking functionality of the authoring tool can detect that content does not meet a requirement of clauses 9 (Web) or 10 (Non-web documents) as applicable. |
| Procedure | 1. The authoring tool provides repair suggestions when content does not meet a requirement of clauses 9 or 10 (as applicable). |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 or 2 is not met. |

#### C.11.8.5 Templates

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. The software is, or includes, [authoring tool](#authoringTool) functionality.  2. The authoring tool provides templates. |
| Procedure | 1. Check that the authoring tool provides at least one template that supports the creation of content that conforms to requirements of clauses 9 (Web) or 10 (Non-web documents) as applicable.  2. Check that at least one template identified in step 1 is available and is identified as conforming to clauses 9 or 10 (as applicable). |
| Result | Pass: Checks 1 and 2 are true  Fail: Check 1 or 2 is false  Not applicable: Pre-condition 1 or 2 is not met. |
| Note: The identification as conforming to the requirements of clauses 9 or 10 (as applicable) described in check 2 may be described in terms such as "Conformant to WCAG 2.2". Where the identification does not explicitly state that all of the requirements identified in clauses 9 or 10 (as appropriate) are covered, it may be necessary to use the template to create a web site or document and then test that web site or document according to the requirements of clauses 9 or 10 to provide full assurance that the template behaves as required. | |

## C.12 Documentation and support services

### C.12.1 Product documentation

#### C.12.1.1 Accessibility and compatibility features

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. Product documentation is supplied with the ICT. |
| Procedure | 1. Check that product documentation provided with the ICT lists and explains how to use the accessibility and compatibility features of the ICT. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.12.1.2 Accessible documentation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. Product documentation in electronic format is supplied with the ICT. |
| Procedure | 1. Check that product documentation in electronic format provided with the ICT conforms to the requirements of clauses 9 or 10 as appropriate. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

### C.12.2 Support services

#### C.12.2.1 General

Clause 12.2.1 is informative only and contains no testable requirements.

#### C.12.2.2 Information on accessibility and compatibility features

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT support services are provided.  2. Product documentation is supplied with the ICT. |
| Procedure | 1. Check that the ICT support services provide information on the accessibility and compatibility features that are included in the product documentation. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

#### C.12.2.3 Effective communication

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT support services are provided. |
| Procedure | 1. Check that the ICT support services accommodate the communication needs of individuals with disabilities either directly or through a referral point. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |
| Note: The provision of any level of support for the communication needs of individuals with disabilities constitutes a pass of this requirement. Suppliers may wish to provide further information about the level of support that is provided to enable the adequacy and quality of the support to be judged. | |

#### C.12.2.4 Accessible documentation

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. Documentation is provided by the ICT support services. |
| Procedure | 1. Check that documentation in electronic format provided by the ICT support services conforms to the requirements of clauses 9 or 10 as appropriate. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: Pre-condition 1 is not met. |

## C.13 ICT providing relay or emergency service access

### C.13.1 Relay services

#### C.13.1.1 General (informative)

Clause 13.1.1 is informative only and contains no testable requirements.

#### C.13.1.2 Relay service access

##### C.13.1.2.1 General remarks on access to relay services (informational)

Clause 13.1.2.1 is informative only and contains no testable requirements.

##### C.13.1.2.2 Assignment of the user identifier for the primary users of relay services

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a relay service invocation system  2. The specified relay service is available and operational  3. A primary user communication client C1 that has the rights and means for use of a relay service is available.. |
| Procedure | 1. **Check** that the primary user communication client C1 is provided with a user identifier for communications via the ICT under test. |
| Result | Pass: Check 1 is true  Fail: Check 1 is false  Not applicable: At least one pre-condition is not met. |

##### C.13.1.2.3 Conveying of calling identifier in relayed communications for primary relay users

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a relay service invocation system.  2. The specified relay service is available and operational.  3. A primary user communication client C1 that has the rights and means and an identifier for use of a relay service is available.  4. Another communication client C2 for use by a secondary user is available. |
| Procedure | 1. C1 is set to non-anonymous communications mode.  2. A communication session is established using the communication system from communication client C1 to communication client C2 via the ICT under test.  3. **Check** that the specified relay service is included in the communication and can be used, and that the caller identifier of C1 is indicated in the incoming communication in C2.  4. The communication is ended and C2 makes use of the caller identifier of C1 as the user identifier for initiating a communication to C1.  5. **Check** that the communication is established with C1 and a relay service is or can be invoked in the communication depending on options for C1.  6. The communication is ended.  7. C1 is set to anonymous communication option if that setting is available in the ICT. If so, continue with steps 8 and 9.  8. A communication session is established using the communication system from communication client C1 to communication client C2 with an indication that relay service is wanted in the communication.  9. **Check** that no caller identifier is presented in C2, if the anonymous communications mode was available. |
| Result | Pass: Check 3 and Check 5 are true, and Check 9 is true if anonymous communication mode is available in the ICT.  Fail: Any of Check 3 or Check 5 or Check 9 is false.  Not applicable: At least one of preconditions 1 to 4 is not met. |

##### C.13.1.2.4 Relay service invocation decision in outgoing communications

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a relay service invocation system.  2. The specified relay service is available and operational.  3. A primary user communication client C1 that has the rights and means and an identifier for use of a relay service is available.  4. Another communication client C2 for use by a secondary user is available. |
| Procedure | 1. A communication session is established from communication client C1 to communication client C2 with a manual indication that relay service is wanted in the communication.  2. **Check** that the specified relay service is included in the communication and can be used C2.  3. The communication is ended.  4. A communication session is established from communication client C1 to communication client C2 with a manual indication that relay service is not wanted in the communication.  5. **Check** that communication is enabled between C1 and C2 without relay service and that common media can be used.  Note: If the communication system is specified to connect to a number of available relay services, the test needs to be repeated separately for each of the available relay services. |
| Result | Pass: Check 2 and Check 5 are true.  Fail: Any of Check 2 or Check 5 is false.  Not applicable: At least one of the preconditions is not met. |

##### C.13.1.2.5 Relay service invocation decision in incoming communications

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a relay service invocation system.  2. The specified relay service is available and operational.  3. A primary user communication client C1 that has the rights and means and an identifier for use of a relay service is available.  4. Another communication client C2 for use by a secondary user is available. |
| Procedure | 1. A communication session is initiated from communication client C2 to communication client C1.  2. An indication is provided by manual action in C1 indicating that relay service is wanted in the communication.  3. **Check** that the specified relay service is included in the communication and can be used between C1 and C2.  4. The communication is ended.  5. A communication session is initiated from communication client C2 to communication client C1.  6. An indication is provided by manual action in C1 indicating that relay service is not wanted in the communication.  7. **Check** that communication is enabled between C1 and C2 without relay service and that common media can be used. |
| Result | Pass: Check 3 and Check 7 are true.  Fail: Any of Check 3 or Check 7 is false.  Not applicable: At least one of the preconditions is not met. |
| Note: If the communication system is specified to connect to a number of available relay services, the test needs to be repeated separately for each of the available relay services. | |

##### C.13.1.2.6 Relay service support requested by the primary user for emergency communications

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a relay service invocation system.  2. The specified relay service is available and operational.  3. A primary user communication client C1 that has the rights and means and an identifier for use of a relay service is available.  4. Test emergency communication PSAP is available. |
| Procedure | 1. An emergency communication session is established using the communication client C1 and the test emergency communication PSAP.  2. **Check** that the relay service invocation system invokes the relay service and the emergency communication via a multi-party bridge.  3. **Check** that specified relay service enables interaction by providing conversion between the communication modalities provided by the relay service and that all parties can view all communication between the parties. |
| Result | Pass: Check 2 and 3 is true  Fail: Check 2 or 3 is false  Not applicable: At least one of preconditions 1 to 4 is not met. |

#### C.13.1.3 Relay service requirements

##### C.13.1.3.1 Relaying action in relay service communication

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a relay service.  2. A communication client C1 is available that has the rights and means to be used by a primary user for access to the ICT.  3. The specific relay service is available and operational.  4. Another communication client C2 is available for use by a secondary user.  Note: C2 may be from another communications system that interoperates with the one that C1 is linked to. |
| Procedure | 1. A communication session is established using the communication system from communication client C1 to communication client C2 with an indication that relay service is wanted in the communication (by default or by specific action).  2. **Check** that the relay service enables interaction by providing the requested conversion between the communication modalities or communications support.  3. **Check** that media which are specified to be carried through the relay service connection are carried through in the specified direction. |
| Result | Pass: Both Checks are true.  Fail: At least one Check is false.  Not applicable: At least one of preconditions 1 to 4 is not met. |

##### C.13.1.3.2 Media handling in relay service communication

|  |  |
| --- | --- |
|  |  |
|  | 1. ICT under test is, or includes, a communication system that supports continuous bidirectional voice communication.  2. A communication client C1 of the ICT is available that supports total conversation, and has the rights and means to be used by a primary user with a specific relay service.  3. The specific relay service is available and operational.  4. Another communication client C2 that supports total conversation with the ICT is available for use by a secondary user.  NOTE: C2 may be from another communications system that interoperates with the one that C1 is linked to. |
|  | 1. A communication session is established using the communication system from communication client C1 to communication client C2 with an indication that relay service is wanted in the communication.  2. **Check** that the specified relay service enables interaction by providing the requested conversion between the communication modalities and that any media not involved in the relaying are carried through between C1 and C2. |
|  | 2  2  At least one of preconditions 1 to 4 is not met |
| Note: If the communication system is specified to connect to a number of available relay services, the test needs to be repeated separately for each of the available relay services. | |

##### C.13.1.3.3 Relay service support in ICT based conferences

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a relay service.  2. A conference participant communication client C1 for taking part in the conference is available.  3. A specified relay service is available for the primary user of C1 and operational. |
| Procedure | 1. The primary user of the relay service communicates prior to the conference with the relay service and asks the relay service to connect to the conference.  2. The relay service connects to the conference.  3. The primary user of the relay service connects C1 to the conference.  4. The media channels required for the relay service and the user of the relay service to communicate in real time are established via the conference system or directly whichever is feasible for the type of conference.  5. **Check** that the communication is established and the primary user of the relay service is enabled to both take part of the conference contents and contribute.  NOTE: In order for the relay service to have the best information to successfully convey the conference voice communications the relay service should not only be able to hear the voice channel of the conference but also view all contents of the conference. |
| Result | Pass: Check 5 is true  Fail: Check 5 is false  Not applicable: At least one of preconditions 1 to 3 is not met. |

##### C.13.1.3.4 Relay service support during emergency communications initiated by the PSAP

|  |  |
| --- | --- |
| Type of assessment | Inspection |
| Pre-conditions | 1. ICT under test is, or includes, a relay service.  2. A communication client C1 of a communication service is available that supports continuous bidirectional voice communication.  3. The specific relay service is available and operational.  4. A test emergency communication PSAP is available. |
| Procedure | 1. An emergency communication session is established using the communication client C1 and the test emergency communication PSAP.  2. It is detected by manual or automatic means that a relay service is needed in the communication. The PSAP call-taker invokes the relay service via a multi-party bridge.  3. **Check** that, the specified relay service enables interaction by providing conversion between the communication modalities provided by the relay service, and that all parties can view all communication between the parties. |
| Result | Pass: Check 3 is true  Fail: Check 3 is false  Not applicable: At least one of the preconditions is not met. |

### C.13.2 Void

Note: Was access to relay services which is now integrated in clause 13.1 of the present document

### C.13.3 Access to emergency services (informative)

Clause 13.3 is informative only and contains no testable requirements.



# Annex D (informative): Further resources for cognitive accessibility

It is evident that people with limited cognitive, language and learning abilities have diverse accessibility needs and preferences and that there is a need for further guidelines and standards. Research in this area is ongoing.

Relevant standardisation work is currently being undertaken by the W3C Web Accessibility Initiative (WAI). WAI are working to improve the requirements and technical guidance for developers, to better address Web accessibility for people with limited cognitive, language and learning abilities. Current W3C activity in this area can be found at <https://www.w3.org/WAI/cognitive/>.

Ensuring that information is both easy-to-read and uses easy-to-understand language is an important way to support the needs of users with cognitive and learning disabilities. ISO/IEC 23859:2023: "Information technology – User interfaces – Requirements and recommendations on making written text easy to read and understand" [i.62] is a valuable source of requirements and recommendations in this area.

# Annex E (informative): Guidance and additional resources for users of the present document

## E.1 Introduction

This explanatory annex is designed to enable users of the present document to make best use of it.

The standard was originally intended for procurement purposes. The scope is now changed and the current version also contains the minimum requirements of the European Web Accessibility Directive (Directive 2016/2102 [i.28]) and of the European Accessibility Act (Directive 2019/882 [i.30]).

EN 301 549 contains a wide range of requirements to cover a variety of ICT solutions. There are for example requirements on function, physical characteristics and software. No matter if you are responsible for procuring, testing, planning, manufacturing, maintaining or reporting on accessibility, it is necessary to understand which requirements are relevant for a specific product or service in a specific situation or contex

Testing for accessibility requirements does not always result in a yes or no. Sometimes, you end up in a grey zone where it is equally important to understand the prerequisites and potential alternatives for different end user groups. Remember that accessibility has to do with humans.

The examples mentioned in this annex are only inspirational and the standard can of course be used in many different ways and settings.

## E.2 Overview

The present document consists of fourteen clauses (equivalent to chapters in a book) and six annexes.

**Clauses 0 to 3** contain background information, the scope of the standard, links to references, definitions of terminology and explanations of abbreviations. These clauses have a lot of valuable information, but it can be hard to read the standard from A to Z.

**Clause 4** covers functional performance statements, which are directly related to end-user needs. The clause explains what functionality is needed to enable end users to locate, identify and operate functions in technology, no matter of their abilities. This is an important clause where you can learn about what challenges accessibility requirements aim to solve.

**Clauses 5 to 13** are the actual technical requirements. Most readers start here, but clause 4 can possibly be a better place to begin, to really understand how to use the detailed technical parts.

The technical requirements cover many different kinds of ICT divided into separate clauses, but it is always a good idea to have a look at clause 5, since this is where the general requirements are.

**Clauses 9, 10 and 11** are the ones that are most relevant to the European Web Accessibility Directive [i.28]. They cover websites, documents and apps. However, requirements from other clauses apply, as listed in the tables in Annex A.

**Clause 14** deals with conformance to EN 301 549 as a whole and to the individual requirements.

**Annex A** describes how the standard relates to the European Web Accessibility Directive [i.28]. Apart from the minimum requirements in clauses 9, 10 and 11, some of the requirements in clauses 5, 6, 7 and 12 can also be relevant to fulfill the Directive, in specific situations. The tables in Annex A show which of the requirements are important to look at.

**Annex B** describes how the functional performance statements of clause 4 relate to the technical requirements in clauses 5 to 13. This is a useful tool that will, for example, help you to use the standard in procurement to identify the impact that specific requirements have on end users when comparing proposals.

**Annex C** describes how you can test that each requirement of the standard is met. The annex does not provide a testing methodology and you still have to know quite a lot about functional performance statements and testing procedures to make use of it.

**Annex D** provides a link to further resources for cognitive accessibility.

**Annex E** is what you are reading right now.

**Annex F** provides a change history table.

## E.3 Clause 4

Clause 4 is in a sense the heart of the standard. The end users, with their different needs, are the reason accessibility matters. The user needs behind each functional performance statement are also the reason for each of the requirements in the present document.

Clause 4 does not include any requirements in itself, just descriptions. This may make it seem less important but, in reality, it is the other way around. The aim of the whole standard is to ensure that end users with the varying abilities described in this clause can use products and services.

In this clause, ten functional performance statements based on variations of impairments are described, plus privacy. The impairments can be permanent, temporary or situational. End users with multiple impairments might need specific combinations of accessibility solutions. Therefore, it is necessary to consider all different functional performance statements as well as a combination of them.

The concept behind the standard is to let technology help compensate the challenges that end users can have. You can also look at accessibility as alternative ways to use technology. For example: if the end user cannot see, technology can provide sound. If the end user cannot hear, the technology can provide text. This is what clause 4 is describing for each user group, in detail.

After reading clause 4, you will understand the logic of the requirements in the standard much better.

## E.4 How to use the standard

### E.4.1 Self scoping requirements

The requirements in the present document are called self-scoping. This means that they consist of two parts; the first part is a precondition for the second part, which holds the actual requirement. If the first part is true, you need to meet the second part of the requirement. If the first part is **not** true, this means that the requirement is not applicable.

For example, a requirement saying "Where ICT hardware has speech output, it shall provide […]" can be met in two ways:

* If your product or service provides speech, you need to fulfill the second part of the requirement.
* If your product or service does not provide speech, you do not need to think about the second part of the requirement. The requirement is not applicable.

To meet the standard means that all applicable requirements in the standard are met.

To get an overview of the requirements in scope of your product or service, you can focus on the requirements with the same scoping statements. There are online tools that can help you filter out requirements that are automatically met.

### E.4.2 Connection between requirements and functional performance statements

The table in Annex B helps you understand the connection between the requirements and the functional performance statements. There is an instruction on how to use the table under clause B.2.

Before making a decision about the most suitable solution, you also need to think about the context. Here are some examples:

* In what situation is the solution going to be used?
* Which failed requirements are possible to compensate with other alternatives, like for example a service desk?
* What would it cost to solve an issue with an alternative like that?
* Will the failed requirements be possible to fix in the next version of the solution?

Suppliers may show how their product or service addresses the functional performance statements in clause 4 in addition to meeting the requirements in clauses 5 to 13. This can help you choose which product or service is most suitable.

## E.5 The European Web Accessibility Directive [i.28]

The European Web Accessibility Directive (Directive 2016/2102 [i.28]) is a minimum harmonisation Directive. This means that all EU member states and EFTA countries are required to at least comply with the minimum requirements referred to in the Directive. Each country can choose to go beyond these requirements in their national legislation when it comes to both requirements and scope.

The Directive covers, as a minimum, public sector bodies and some government owned, funded or led organizations.

Note: The definition of public sector body is referring to the Procurement Directive (Directive 2014/24/EU [i.40]) article 2(1) point 4, which defines "bodies governed by public law" as bodies that have all of the following characteristics:

* they are established for the specific purpose of meeting needs in the general interest, not having an industrial or commercial character;
* they have legal personality; and
* they are financed, for the most part, by the State, regional or local authorities, or by other bodies governed by public law; or are subject to management supervision by those authorities or bodies; or have an administrative, managerial or supervisory board, more than half of whose members are appointed by the State, regional or local authorities, or by other bodies governed by public law.

Most of the requirements that relate to the European Web Accessibility Directive are found in clauses 9, 10 and 11, which cover websites, documents and software. The complete list of requirements are listed in the tables in Annex A. The Directive also covers intranets and extranets, which are to meet the requirements of clause 9 for web content and clause 10 for documents.

There are different grace periods for different kinds of content and there are also exceptions to what content is covered by the Directive. For example, live video is not covered by the Directive. This means that requirements 9.1.2.4 for websites, 10.1.2.4 for documents and 11.1.2.4 for apps are not relevant to meeting the requirements of the Directive.

Please note that there are also other requirements in the Directive, for example on monitoring and accessibility statements. These are not covered in EN 301 549.

## E.6 Annex D: Further resources for cognitive accessibility

Annex D provides a link to W3C resources that can be used as guidance to improve the inclusion of accessibility for people with limited cognitive, language and learning abilities when using ICT products and services.

## E.7 Additional resources applicable to specific product and service categories

### E.7.1 Web technologies

There is some very comprehensive guidance on the intent, benefits, examples, and techniques related to the use of WCAG 2.2 Success Criteria provided by W3C in its [WCAG 2.2 "Understanding Docs"](https://www.w3.org/WAI/WCAG22/Understanding/). This is valuable in the context of the present document as clause 9 of the present document WCAG 2.2 is entirely compatible with WCAG 2.2 and both clauses 10 on non-web documents and clause 11 on software are both very strongly related to WCAG 2.2.

### E.7.2 Digital television-related ICT

An ETSI Technical Report TR 104 060 [i.68] has been developed with the involvement of companies with a diverse range of involvement in the digital television sector. It is targeted at manufacturers and providers of digital television products, and intended to clarify and explain how EN 301 549 accessibility requirements should be applied for televisions and to provide consistency of interpretation.

# Annex ZA (informative): Relationship between the present document and the essential requirements of Directive 2016/2102

The present document has been prepared under the Commission's standardisation request C(2017)2585 final [i.27] to provide one voluntary means of conforming to the essential requirements of Directive 2016/2102 on the accessibility of the websites and mobile applications of public sector bodies [i.28].

Once the present document is cited in the Official Journal of the European Union under that Directive, conformance with the normative clauses of the present document given in Tables ZA.1 and ZA.2 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

The requirements listed in Table ZA.1 apply to:

* web pages (as defined in clause 3.1);
* documents that are web pages;
* documents that are embedded in web pages and that are used in the rendering or that are intended to be rendered together with the web page in which they are embedded;
* documents, including forms, that are downloadable from web pages but are neither embedded nor rendered together with the web page from which they are provided;
* software that is a web page; or
* software that is embedded in web pages and that is used in the rendering or that is intended to be rendered together with the web page in which it is embedded.

The requirements listed in Table ZA.2 apply to mobile applications that provide a user interface, including content (such as documents and forms) that is in the software or provided by the software.

Note 1: According to Directive 2016/2102 [i.28]: "Content of websites and mobile applications includes textual as well as non-textual information, downloadable documents and forms, and two-way interaction such as the processing of digital forms and the completion of authentication, identification and payment processes".

Note 2: Annex ZA is a required element in all Harmonised standards. Its purpose is to explain how the essential requirements of a Directive can be met. Tables ZA.1 and ZA.2 are therefore restricted to those elements that relate to the essential requirements of Directive 2016/2102 [i.28].

Note 3: Annex ZA describes how the standard relates to the European Web Accessibility Directive. Apart from the minimum requirements in clauses 9, 10 and 11, some of the requirements in clauses 5, 6, 7 and 12 can also be relevant to fulfill the Directive in specific situations. The tables in Annex ZA show which requirements are relevant.

Note 4: Because the Web Accessibility Directive (EU) 2016/2102 "does not apply to live time-based media", the following requirements are not listed in Tables ZA.1 and ZA.2. They are, however, necessary requirements for making live streaming media accessible:

* + 9.1.2.4 Captions (live)
  + 10.1.2.4 Captions (live)
  + 11.1.2.4 Captions (live).

**Key to Tables ZA.1 and ZA.2 columns:**

**Requirement:**

**Requirement**

Identification of clause(s) defining the requirement in the present document unless another document is referenced explicitly.

**P, O, U, R**

Identification of article(s) defining the requirement in the Directive, with P meaning "Perceivable", O meaning"Operable", U meaning "Understandable, and R meaning "Robust".

**Condition** For conditional requirements this column describes the condition that has to be met for conformance with the clause to be a requirement.

**Assessment:**

Indicates the clause of the present document that contains the relevant assessment method.

Presumption of conformity stays valid only as long as a reference to the present document is maintained in the list published in the Official Journal of the European Union. Users of the present document should consult frequently the latest list published in the Official Journal of the European Union.

Other Union legislation may be applicable to the product(s) falling within the scope of the present document.

Table ZA.1: Web Content - relationship between the present document and  
the essential requirements of Directive 2016/2102/EU

| **Clause** | **Requirement** | **P** | **O** | **U** | **R** | **Condition** | **Assessment** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| [5.2](#_5.2_Activation_of) | Activation of accessibility features | ✓ | ✓ | ✓ |  | Where ICT includes documented accessibility features | [C.5.2](#_C.5.2_Activation_of) |
| 5.3 | Biometrics |  | ✓ |  |  | Where ICT uses biological characteristics | C.5.3 |
| 5.4 | Preservation of accessibility information during conversion | ✓ |  | ✓ | ✓ | Where ICT converts information or communication | C.5.4 |
| 6.1 | Audio bandwidth for voice communication | ✓ |  |  |  | Where ICT provides continuous bidirectional voice communication | C.6.1 |
| 6.3 | Caller ID | ✓ | ✓ | ✓ | ✓ | Where ICT provides caller identification or other identification functions | C.6.3 |
| 6.4 | Alternatives to voice-based services | ✓ | ✓ | ✓ |  | Where ICT provides voice mail, auto-attendant, or interactive voice response facilities | C.6.4 |
| 6.5.2 | Resolution | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.2 a |
| 6.5.3 | Frame rate | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.3 a |
| 6.5.4 | Synchronization between audio and video | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.4 |
| 6.5.5 | Visual indicator of audio with video | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.5 |
| 6.5.6 | Speaker identification with video (sign language) communication | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication, and provides speaker identification for voice users | C.6.5.6 |
| 7.1.1 | Captioning playback | ✓ |  | ✓ |  | Where ICT displays video with synchronized audio | C.7.1.1 |
| 7.1.2 | Captioning synchronization | ✓ |  |  |  | Where ICT displays video with synchronized audio, and displays captions | C.7.1.2 |
| 7.1.3 | Preservation of captioning | ✓ |  | ✓ |  | Where ICT transmits, converts, or records video with synchronized audio | C.7.1.3 |
| 7.1.4 | Captions characteristics | ✓ |  |  |  | Where ICT displays video with synchronized audio, and displays captions | C.7.1.4 |
| 7.1.5 | Spoken interlingual subtitles | ✓ |  | ✓ |  | Where ICT displays video with synchronized audio, and provides interlingual subtitles | C.7.1.5 |
| 7.2.1 | Audio description playback | ✓ |  | ✓ |  | Where ICT displays video with synchronized audio | C.7.2.1 |
| 7.2.2 | Audio description synchronization | ✓ |  |  |  | Where ICT displays video with synchronized audio, and has a mechanism to play audio description | C.7.2.2 |
| 7.2.3 | Preservation of audio description | ✓ |  | ✓ |  | Where ICT transmits, converts, or records video with synchronized audio | C.7.2.3 |
| 7.3 | User controls for captions and audio description | ✓ | ✓ |  |  | Where ICT displays video with synchronized audio, and has control over the presentation of subtitles and audio description | C.7.3 |
| 9.1.1.1 | Non-text content | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.1.1 |
| 9.1.2.1 | Audio-only and video-only (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.2.1 |
| 9.1.2.2 | Captions (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.2.2 |
| 9.1.2.3 | Audio description or media alternative (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.2.3 |
| 9.1.2.5 | Audio description (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.2.5 |
| 9.1.3.1 | Info and relationships | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.3.1 |
| 9.1.3.2 | Meaningful sequence | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.3.2 |
| 9.1.3.3 | Sensory characteristics | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.3.3 |
| 9.1.3.4 | Orientation | ✓ | ✓ |  |  | Where ICT is, or includes, a web page | C.9.1.3.4 |
| 9.1.3.5 | Identify input purpose | ✓ | ✓ |  |  | Where ICT is, or includes, a web page | C.9.1.3.5 |
| 9.1.4.1 | Use of colour | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.4.1 |
| 9.1.4.2 | Audio control | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.4.2 |
| 9.1.4.3 | Contrast (minimum) | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.4.3 |
| 9.1.4.4 | Resize text | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.4.4 |
| 9.1.4.5 | Images of text | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.4.5 |
| 9.1.4.10 | Reflow | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.4.10 |
| 9.1.4.11 | Non-text contrast | ✓ |  |  |  | Where ICT is, or includes, a web page | C.9.1.4.11 |
| 9.1.4.12 | Text spacing | ✓ | ✓ |  |  | Where ICT is, or includes, a web page | C.9.1.4.12 |
| 9.1.4.13 | Content on hover or focus | ✓ | ✓ |  |  | Where ICT is, or includes, a web page | C.9.1.4.13 |
| 9.2.1.1 | Keyboard |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.1.1 |
| 9.2.1.2 | No keyboard trap |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.1.2 |
| 9.2.1.4 | Character key shortcuts |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.1.4 |
| 9.2.2.1 | Timing adjustable |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.2.1 |
| 9.2.2.2 | Pause, stop, hide | ✓ | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.2.2 |
| 9.2.3.1 | Three flashes or below threshold |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.3.1 |
| 9.2.4.1 | Bypass blocks |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.4.1 |
| 9.2.4.2 | Page titled |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.4.2 |
| 9.2.4.3 | Focus order |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.4.3 |
| 9.2.4.4 | Link purpose (in context) |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.4.4 |
| 9.2.4.5 | Multiple ways |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.4.5 |
| 9.2.4.6 | Headings and labels |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.4.6 |
| 9.2.4.7 | Focus visible |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.4.7 |
| 9.2.4.11 | Focus not obscured (minimum) | ✓ | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.4.11 |
| 9.2.5.1 | Pointer gestures |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.5.1 |
| 9.2.5.2 | Pointer cancellation |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.5.2 |
| 9.2.5.3 | Label in name |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.5.3 |
| 9.2.5.4 | Motion actuation |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.5.4 |
| 9.2.5.7 | Dragging movements |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.5.7 |
| 9.2.5.8 | Target size (minimum) |  | ✓ |  |  | Where ICT is, or includes, a web page | C.9.2.5.8 |
| 9.3.1.1 | Language of page |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.1.1 |
| 9.3.1.2 | Language of parts |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.1.2 |
| 9.3.2.1 | On focus |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.2.1 |
| 9.3.2.2 | On input |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.2.2 |
| 9.3.2.3 | Consistent navigation |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.2.3 |
| 9.3.2.4 | Consistent identification |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.2.4 |
| 9.3.2.6 | Consistent help |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.2.6 |
| 9.3.3.1 | Error identification |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.3.1 |
| 9.3.3.2 | Labels or instructions |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.3.2 |
| 9.3.3.3 | Error suggestion |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.3.3 |
| 9.3.3.4 | Error prevention (legal, financial, data) |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.3.4 |
| 9.3.3.7 | Redundant entry |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.3.7 |
| 9.3.3.8 | Accessible authentication (minimum) |  |  | ✓ |  | Where ICT is, or includes, a web page | C.9.3.3.8 |
| 9.4.1.2 | Name, role, value |  |  |  | ✓ | Where ICT is, or includes, a web page | C.9.4.1.2 |
| 9.4.1.3 | Status messages | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, a web page | C.9.4.1.3 |
| 9.6 | WCAG conformance requirements | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, a web page | C.9.6 |
| 10.1.1.1 | Non-text content | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.1.1 |
| 10.1.2.1 | Audio-only and video-only (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.2.1 |
| 10.1.2.2 | Captions (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.2.2 |
| 10.1.2.3 | Audio description or media alternative (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.2.3 |
| 10.1.2.5 | Audio description (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.2.5 |
| 10.1.3.1 | Info and relationships | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.1 |
| 10.1.3.2 | Meaningful sequence | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.2 |
| 10.1.3.3 | Sensory characteristics | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.3 |
| 10.1.3.4 | Orientation | ✓ | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.4 |
| 10.1.3.5 | Identify input purpose | ✓ | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.5 |
| 10.1.4.1 | Use of colour | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.1 |
| 10.1.4.2 | Audio control | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.2 |
| 10.1.4.3 | Contrast (minimum) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.3 |
| 10.1.4.4 | Resize text | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.4 |
| 10.1.4.5 | Images of text | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.5 |
| 10.1.4.10 | Reflow | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.10 |
| 10.1.4.11 | Non-text contrast | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.11 |
| 10.1.4.12 | Text spacing | ✓ | ✓ |  |  | Where ICT is, or includes, a non-web document that does not have a fixed size content layout area that is essential to the information being conveyed | C.10.1.4.12 |
| 10.1.4.13 | Content on hover or focus | ✓ | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.13 |
| 10.2.1.1 | Keyboard |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.1.1 |
| 10.2.1.2 | No keyboard trap |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.1.2 |
| 10.2.1.4 | Character key shortcuts |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.1.4 |
| 10.2.2.1 | Timing adjustable |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.2.1 |
| 10.2.2.2 | Pause, stop, hide |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.2.2 |
| 10.2.3.1 | Three flashes or below threshold |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.3.1 |
| 10.2.4.2 | Document titled |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.2 |
| 10.2.4.3 | Focus order |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.3 |
| 10.2.4.4 | Link purpose (in context) |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.4 |
| 10.2.4.6 | Headings and labels |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.6 |
| 10.2.4.7 | Focus visible |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.7 |
| 10.2.4.11 | Focus not obscured (minimum) |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.11 |
| 10.2.5.1 | Pointer gestures |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.1 |
| 10.2.5.2 | Pointer cancellation |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.2 |
| 10.2.5.3 | Label in name |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.3 |
| 10.2.5.4 | Motion actuation |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.4 |
| 10.2.5.7 | Dragging movements |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.7 |
| 10.2.5.8 | Target size (minimum) |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.8 |
| 10.3.1.1 | Language of document |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.1.1 |
| 10.3.1.2 | Language of parts |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.1.2 |
| 10.3.2.1 | On focus |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.2.1 |
| 10.3.2.2 | On input |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.2.2 |
| 10.3.2.6 | Consistent help |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.2.6 |
| 10.3.3.1 | Error identification |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.1 |
| 10.3.3.2 | Labels or instructions |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.2 |
| 10.3.3.3 | Error suggestion |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.3 |
| 10.3.3.4 | Error prevention (legal, financial, data) |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.4 |
| 10.3.3.7 | Redundant entry |  | ✓ | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.7 |
| 10.3.3.8 | Accessible authentication (minimum) |  | ✓ |  | ✓ | Where ICT is, or includes, a non-web document | C.10.3.3.8 |
| 10.4.1.2 | Name, role, value |  |  |  | ✓ | Where ICT is, or includes, a non-web document | C.10.4.1.2 |
| 10.4.1.3 | Status messages | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, a non-web document | C.10.4.1.3 |
| 11.8.1 | Content technology | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality | C.11.8.1 |
| 11.8.2 | Accessible content creation | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality | C.11.8.2 |
| 11.8.3 | Preservation of accessibility information in transformations | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality, and provides restructuring transformations or re-coding transformations | C.11.8.3 |
| 11.8.4 | Repair assistance | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality, and can detect that content does not meet a requirement of clauses 9 (Web) or 10 (Non-web documents) as applicable | C.11.8.4 |
| 11.8.5 | Templates | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality, and provides templates | C.11.8.5 |
| 12.1.1 | Accessibility and compatibility features | ✓ | ✓ | ✓ | ✓ | Where ICT includes product documentation, whether provided separately or integrated within the ICT | C.12.1.1 |
| 12.1.2 | Accessible documentation | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, product documentation | C.12.1.2 |
| 12.2.2 | Information on accessibility and compatibility features | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, support services | C.12.2.2 |
| 12.2.3 | Effective communication | ✓ |  | ✓ | ✓ | Where ICT is, or includes, support services | C.12.2.3 |
| 12.2.4 | Accessible documentation | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, support services, and the support services provide documentation | C.12.2.4 |

Table ZA.2: Mobile Applications - relationship between the present document and the essential requirements of Directive 2016/2102/EU

| **Clause** | **Requirement** | **P** | **O** | **U** | **R** | **Condition** | **Assessment** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| [5.1.3.6](#_5.1.3.6_Speech_output) | Speech output for non-text content | ✓ |  | ✓ |  | Where ICT includes closed functionality, and presents non-text content | [C.5.1.3.6](#_C.5.1.3.6_Speech_output) |
| 5.1.3.7 | Speech output for video information | ✓ |  | ✓ |  | Where ICT includes closed functionality, and pre-recorded video content is needed to enable the use of closed functionality of the ICT, and speech output is provided as non-visual access to closed functionality | C.5.1.3.7 |
| 5.1.3.14 | Spoken languages | ✓ |  | ✓ |  | Where ICT includes closed functionality, and speech output is provided as non-visual access to closed functionality | C.5.1.3.14 |
| 5.1.3.15 | Non-visual error identification | ✓ |  | ✓ |  | Where ICT includes closed functionality, and speech output is provided as non-visual access to closed functionality, and an input error is automatically detected | C.5.1.3.15 |
| 5.1.4 | Functionality closed to text enlargement | ✓ |  | ✓ |  | Where ICT includes closed functionality, and any functionality of the ICT is closed to the text enlargement features of platform or assistive technology | C.5.1.4 |
| 5.1.5 | Visual output for auditory information | ✓ |  | ✓ |  | Where ICT includes closed functionality, and auditory information is needed to enable the use of closed functionality of the ICT | C.5.1.5 |
| 5.1.6.1 | Closed functionality |  | ✓ |  |  | Where ICT includes closed functionality, and the functionality is closed to keyboards or keyboard interfaces | C.5.1.6.1 |
| 5.1.8 | Identify input purpose (closed functionality) (was 11.1.3.5.2) | ✓ |  | ✓ |  | Where ICT includes closed functionality | C.5.1.8 |
| 5.2 | Activation of accessibility features | ✓ | ✓ | ✓ |  | Where ICT includes documented accessibility features | C.5.2 |
| 5.3 | Biometrics |  | ✓ |  |  | Where ICT uses biological characteristics | C.5.3 |
| 5.4 | Preservation of accessibility information during conversion | ✓ |  | ✓ | ✓ | Where ICT converts information or communication | C.5.4 |
| 5.5.1 | Means of operation |  | ✓ |  |  | Where ICT includes operable parts that require grasping, pinching, or twisting of the wrist to operate | C.5.5.1 |
| 5.5.2 | Operable parts discernibility | ✓ | ✓ |  |  | Where ICT includes operable parts | C.5.5.2 |
| 5.6.1 | Tactile or auditory status | ✓ | ✓ |  |  | Where ICT includes a locking or toggle control | C.5.6.1 |
| 5.6.2 | Visual status | ✓ | ✓ |  |  | Where ICT includes a locking or toggle control | C.5.6.2 |
| 5.7 | Key repeat |  | ✓ |  |  | Where ICT includes a key repeat function that cannot be turned off, and that key repeat will result in the generation of multiple entries of the same alphanumeric data into input fields or into documents: | C.5.7 |
| 5.8 | Double-strike key acceptance |  | ✓ |  |  | Where ICT includes a keyboard or keypad | C.5.8 |
| 5.9 | Simultaneous user actions |  | ✓ |  |  | Where ICT includes a mode of operation requiring simultaneous user actions for its operation | C.5.9 |
| 6.1 | Audio bandwidth for voice communication | ✓ |  |  |  | Where ICT provides continuous bidirectional voice communication | C.6.1 |
| 6.3 | Caller ID | ✓ | ✓ | ✓ | ✓ | Where ICT provides caller identification or other identification functions | C.6.3 |
| 6.4 | Alternatives to voice-based services | ✓ | ✓ | ✓ |  | Where ICT provides voice mail, auto-attendant, or interactive voice response facilities | C.6.4 |
| 6.5.2 | Resolution | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.2 a |
| 6.5.3 | Frame rate | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.3 a |
| 6.5.4 | Synchronization between audio and video | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.4 |
| 6.5.5 | Visual indicator of audio with video | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication | C.6.5.5 |
| 6.5.6 | Speaker identification with video (sign language) communication | ✓ |  | ✓ |  | Where ICT provides continuous bidirectional voice communication, and includes continuous bidirectional video communication, and provides speaker identification for voice users | C.6.5.6 |
| 7.1.1 | Captioning playback | ✓ |  | ✓ |  | Where ICT displays video with synchronized audio | C.7.1.1 |
| 7.1.2 | Captioning synchronization | ✓ |  |  |  | Where ICT displays video with synchronized audio, and displays captions | C.7.1.2 |
| 7.1.3 | Preservation of captioning | ✓ |  | ✓ |  | Where ICT transmits, converts, or records video with synchronized audio | C.7.1.3 |
| 7.1.4 | Captions characteristics | ✓ |  |  |  | Where ICT displays video with synchronized audio, and displays captions | C.7.1.4 |
| 7.1.5 | Spoken interlingual subtitles | ✓ |  | ✓ |  | Where ICT displays video with synchronized audio, and provides interlingual subtitles | C.7.1.5 |
| 7.2.1 | Audio description playback | ✓ |  | ✓ |  | Where ICT displays video with synchronized audio | C.7.2.1 |
| 7.2.2 | Audio description synchronization | ✓ |  |  |  | Where ICT displays video with synchronized audio, and has a mechanism to play audio description | C.7.2.2 |
| 7.2.3 | Preservation of audio description | ✓ |  | ✓ |  | Where ICT transmits, converts, or records video with synchronized audio | C.7.2.3 |
| 7.3 | User controls for captions and audio description | ✓ | ✓ |  |  | Where ICT displays video with synchronized audio, and has control over the presentation of subtitles and audio description | C.7.3 |
| 10.1.1.1 | Non-text content | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.1.1 |
| 10.1.2.1 | Audio-only and video-only (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.2.1 |
| 10.1.2.2 | Captions (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.2.2 |
| 10.1.2.3 | Audio description or media alternative (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.2.3 |
| 10.1.2.5 | Audio description (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.2.5 |
| 10.1.3.1 | Info and relationships | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.1 |
| 10.1.3.2 | Meaningful sequence | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.2 |
| 10.1.3.3 | Sensory characteristics | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.3 |
| 10.1.3.4 | Orientation | ✓ | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.4 |
| 10.1.3.5 | Identify input purpose | ✓ | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.1.3.5 |
| 10.1.4.1 | Use of colour | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.1 |
| 10.1.4.2 | Audio control | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.2 |
| 10.1.4.3 | Contrast (minimum) | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.3 |
| 10.1.4.4 | Resize text | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.4 |
| 10.1.4.5 | Images of text | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.5 |
| 10.1.4.10 | Reflow | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.10 |
| 10.1.4.11 | Non-text contrast | ✓ |  |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.11 |
| 10.1.4.12 | Text spacing | ✓ | ✓ |  |  | Where ICT is, or includes, a non-web document that does not have a fixed size content layout area that is essential to the information being conveyed | C.10.1.4.12 |
| 10.1.4.13 | Content on hover or focus | ✓ | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.1.4.13 |
| 10.2.1.1 | Keyboard |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.1.1 |
| 10.2.1.2 | No keyboard trap |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.1.2 |
| 10.2.1.4 | Character key shortcuts |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.1.4 |
| 10.2.2.1 | Timing adjustable |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.2.1 |
| 10.2.2.2 | Pause, stop, hide |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.2.2 |
| 10.2.3.1 | Three flashes or below threshold |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.3.1 |
| 10.2.4.2 | Document titled |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.2 |
| 10.2.4.3 | Focus order |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.3 |
| 10.2.4.4 | Link purpose (in context) |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.4 |
| 10.2.4.6 | Headings and labels |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.6 |
| 10.2.4.7 | Focus visible |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.7 |
| 10.2.4.11 | Focus not obscured (minimum) |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.4.11 |
| 10.2.5.1 | Pointer gestures |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.1 |
| 10.2.5.2 | Pointer cancellation |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.2 |
| 10.2.5.3 | Label in name |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.3 |
| 10.2.5.4 | Motion actuation |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.4 |
| 10.2.5.7 | Dragging movements |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.7 |
| 10.2.5.8 | Target size (minimum) |  | ✓ |  |  | Where ICT is, or includes, a non-web document | C.10.2.5.8 |
| 10.3.1.1 | Language of document |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.1.1 |
| 10.3.1.2 | Language of parts |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.1.2 |
| 10.3.2.1 | On focus |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.2.1 |
| 10.3.2.2 | On input |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.2.2 |
| 10.3.2.6 | Consistent help |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.2.6 |
| 10.3.3.1 | Error identification |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.1 |
| 10.3.3.2 | Labels or instructions |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.2 |
| 10.3.3.3 | Error suggestion |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.3 |
| 10.3.3.4 | Error prevention (legal, financial, data) |  |  | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.4 |
| 10.3.3.7 | Redundant entry |  | ✓ | ✓ |  | Where ICT is, or includes, a non-web document | C.10.3.3.7 |
| 10.3.3.8 | Accessible authentication (minimum) |  | ✓ |  | ✓ | Where ICT is, or includes, a non-web document | C.10.3.3.8 |
| 10.4.1.2 | Name, role, value |  |  |  | ✓ | Where ICT is, or includes, a non-web document | C.10.4.1.2 |
| 10.4.1.3 | Status messages | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, a non-web document | C.10.4.1.3 |
| 11.1.1.1 | Non-text content (was 11.1.1.1.1) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.1.1 |
| 11.1.2.1 | Audio-only and video-only (pre-recorded) (was 11.1.2.1.1) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.2.1 |
| 11.1.2.2 | Captions (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.2.2 |
| 11.1.2.3 | Audio description or media alternative (pre-recorded) (was 11.1.2.3.1) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.2.3 |
| 11.1.2.5 | Audio description (pre-recorded) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.2.5 |
| 11.1.3.1 | Info and relationships (was 11.1.3.1.1) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.3.1 |
| 11.1.3.2 | Meaningful sequence (was 11.1.3.2.1) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.3.2 |
| 11.1.3.3 | Sensory characteristics | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.3.3 |
| 11.1.3.4 | Orientation | ✓ | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.3.4 |
| 11.1.3.5 | Identify input purpose (was 11.1.3.5.1) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.3.5 |
| 11.1.4.1 | Use of colour | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.1 |
| 11.1.4.2 | Audio control | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.2 |
| 11.1.4.3 | Contrast (minimum) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.3 |
| 11.1.4.4 | Resize text (was 11.1.4.4.1) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface, and that supports access to enlargement features of the platform or assistive technology | C.11.1.4.4 |
| 11.1.4.5 | Images of text (was 11.1.4.5.1) | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.1.4.5 |
| 11.1.4.10 | Reflow | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.10 |
| 11.1.4.11 | Non-text contrast | ✓ |  |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.1.4.11 |
| 11.1.4.12 | Text spacing | ✓ | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface, and and where the content is implemented using markup languages, and where users are allowed to modify text spacing properties | C.11.1.4.12 |
| 11.1.4.13 | Content on hover or focus | ✓ | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface, and any visual presentation of the additional content caused by a hover or focus is not controlled by the user agent or platform software, and is not modified by the author | C.11.1.4.13 |
| 11.2.1.1 | Keyboard (was 11.2.1.1.1) |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface, and that provides a keyboard or accepts input from a keyboard or keyboard interface | C.11.2.1.1 |
| 11.2.1.2 | No keyboard trap |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.1.2 |
| 11.2.1.4 | Character key shortcuts (was 11.2.1.4.1) |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface, and that provides a keyboard or accepts input from a keyboard or keyboard interface | C.11.2.1.4 |
| 11.2.2.1 | Timing adjustable |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.2.1 |
| 11.2.2.2 | Pause, stop, hide |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.2.2 |
| 11.2.3.1 | Three flashes or below threshold |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.3.1 |
| 11.2.4.3 | Focus order |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface, and that provides a keyboard or accepts input from a keyboard or keyboard interface | C.11.2.4.3 |
| 11.2.4.4 | Link purpose (in context) |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.4.4 |
| 11.2.4.6 | Headings and labels |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.4.6 |
| 11.2.4.7 | Focus visible |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.4.7 |
| 11.2.4.11 | Focus not obscured (minimum) |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.4.11 |
| 11.2.5.1 | Pointer gestures |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface, and that provides a pointing mechanism or accepts input from pointing devices | C.11.2.5.1 |
| 11.2.5.2 | Pointer cancellation |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface, and that provides a pointing mechanism or accepts input from pointing devices | C.11.2.5.2 |
| 11.2.5.3 | Label in name (was 11.2.5.3.1) |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.2.5.3 |
| 11.2.5.4 | Motion actuation |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.5.4 |
| 11.2.5.7 | Dragging movements |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.5.7 |
| 11.2.5.8 | Target size (minimum) |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.2.5.8 |
| 11.3.1.1 | Language of software (was 11.3.1.1.1) |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.3.1.1 |
| 11.3.2.1 | On focus |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.2.1 |
| 11.3.2.2 | On input |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.2.2 |
| 11.3.2.4 | Consistent identification |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.2.4 |
| 11.3.3.1 | Error identification (was 11.3.3.1.1) |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.3.3.1 |
| 11.3.3.2 | Labels or instructions |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.2 |
| 11.3.3.3 | Error suggestion |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.3 |
| 11.3.3.4 | Error prevention (legal, financial, data) |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.4 |
| 11.3.3.7 | Redundant entry |  |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.7 |
| 11.3.3.8 | Accessible authentication (minimum) |  | ✓ | ✓ | ✓ | Where ICT is, or includes, non-web software that provides a user interface | C.11.3.3.8 |
| 11.4.1.2 | Name, role, value (was 11.4.1.2.1) |  |  |  | ✓ | Where ICT is, or includes, non-web software that provides a user interface, and the software includes functionality that is not closed to programmatic access of information by assistive technologies | C.11.4.1.2 |
| 11.4.1.3 | Status messages |  |  |  | ✓ | Where ICT is, or includes, non-web software that provides a user interface | C.11.4.1.3 |
| 11.5.1 | Closed functionality | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, non-web software that provides a user interface, and that software has closed functionality | C.11.5.1 |
| 11.5.2.1 | Platform interoperability with assistive technologies | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, platform software | C.11.5.2.1 |
| 11.5.2.4 | Assistive technology |  |  |  | ✓ | Where ICT is, or includes, assistive technology | C.11.5.2.4 |
| 11.5.2.5 | Object information | ✓ |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.5 |
| 11.5.2.6 | Row, column, and headers | ✓ |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.6 |
| 11.5.2.7 | Values | ✓ |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.7 |
| 11.5.2.8 | Label relationships | ✓ |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.8 |
| 11.5.2.9 | Parent-child relationships | ✓ |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.9 |
| 11.5.2.10 | Text | ✓ |  | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface, and renders text to a screen | C.11.5.2.10 |
| 11.5.2.11 | List of available actions |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.11 |
| 11.5.2.12 | Execution of available actions |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.12 |
| 11.5.2.13 | Tracking of focus and selection attributes |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.13 |
| 11.5.2.14 | Modification of focus and selection attributes |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.14 |
| 11.5.2.15 | Change notification |  | ✓ | ✓ |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.15 |
| 11.5.2.16 | Modifications of states and properties |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.16 |
| 11.5.2.17 | Modifications of values and text |  | ✓ |  |  | Where ICT is, or includes, non-web software that provides a user interface | C.11.5.2.17 |
| 11.6.1 | User control of accessibility features | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, platform software | C.11.6.1 |
| 11.6.2 | No disruption of accessibility features | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, non-web software that provides a user interface | C.11.6.2 |
| 11.7 | User preferences | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, non-web software that provides a user interface, and is not designed to be isolated from its platform | C.11.7 |
| 11.8.1 | Content technology | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality | C.11.8.1 |
| 11.8.2 | Accessible content creation | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality | C.11.8.2 |
| 11.8.3 | Preservation of accessibility information in transformations | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality, and provides restructuring transformations or re-coding transformations | C.11.8.3 |
| 11.8.4 | Repair assistance | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality, and can detect that content does not meet a requirement of clauses 9 (Web) or 10 (Non-web documents) as applicable | C.11.8.4 |
| 11.8.5 | Templates | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, authoring tool functionality, and provides templates | C.11.8.5 |
| 12.1.1 | Accessibility and compatibility features | ✓ | ✓ | ✓ | ✓ | Where ICT includes product documentation, whether provided separately or integrated within the ICT | C.12.1.1 |
| 12.1.2 | Accessible documentation | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, product documentation | C.12.1.2 |
| 12.2.2 | Information on accessibility and compatibility features | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, support services | C.12.2.2 |
| 12.2.3 | Effective communication | ✓ |  | ✓ | ✓ | Where ICT is, or includes, support services | C.12.2.3 |
| 12.2.4 | Accessible documentation | ✓ | ✓ | ✓ | ✓ | Where ICT is, or includes, support services, and the support services provide documentation | C.12.2.4 |

# Annex ZB (informative): Relationship between the present document and the essential requirements of Directive 2019/882

The present document has been prepared under the Commission's standardisation request C(2022) 6456 final [i.29] to provide one voluntary means of conforming to the essential requirements of Directive 2019/882 on the accessibility requirements of products and services [i.30].

Once the present document is cited in the Official Journal of the European Union under that Directive, conformance with the normative clauses of the present document given in Tables ZB.1 through ZB.3 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

The requirements listed in [Table ZB.1](#TAB_ZB1) apply to all products within the scope of the Directive. These Products are specified in the Article 2 point 1 of the Directive and include:

* consumer general purpose computer hardware systems and operating systems for those hardware systems;
* self-service payment terminals;
* automated teller machines dedicated to the provision of services covered by this Directive:
* ticketing machines dedicated to the provision of services covered by this Directive:
* check-in machines dedicated to the provision of services covered by this Directive:
* interactive self-service terminals providing information, excluding terminals installed as integrated parts of vehicles, aircrafts, ships or rolling stock dedicated to the provision of services covered by this Directive:
* consumer terminal equipment with interactive computing capability, used for electronic communications services;
* consumer terminal equipment with interactive computing capability, used for accessing audiovisual media services; and
* e-readers.

The requirements listed in [Table ZB.2](#TAB_ZB2) constitute the general accessibility requirement that are related to all services covered by the Directive and concerns making websites, including the related online applications, and mobile device-based services, including mobile applications, accessible in a consistent and adequate way by making them perceivable, operable, understandable and robust.

The requirements listed in [Table ZB.3](#TAB_ZB3) apply to the specific services within the scope of the Directive additional accessibility requirements for which are to be addressed by the EN 301 549 in order to maximise their foreseeable use by persons with disabilities. These Services include:

* electronic communications services with the exception of transmission services used for the provision of machine-to- machine services;
* services providing access to audiovisual media services;
* electronic tickets of air, bus, rail and waterborne passenger transport services, except for urban, suburban and regional transport services
* consumer banking services;
* e-commerce services

Note: Because an ICT product or service could have features and functions that belong to several of the categories identified of Directive 2019/882 it might need to meet the essential requirements that are listed in several rows of multiple tables in Annex ZB. This makes the tables in Annex ZB impractical for use in assessing whether a specific ICT product or service meets all the applicable requirements in the present document. The tables in Annex A.2 offer the most appropriate way to assess the conformance of a specific ICT to the essential requirements of Directive 2019/882.

Table ZB.1 Relationship between the present document and the general accessibility requirements related to all products covered by Directive 2019/882/EU in accordance with Article 2(1) (Directive 2019/882/EU, Annex 1, Section I)

| Essential requirements of Directive:  Annex I Section I | Description | Clause(s) of the present document | Products |
| --- | --- | --- | --- |
| 2(a) | Provision of Communication, operation, information, control and orientation with more than one sensory channel | 5.1, 5.2, 5.4, 5.5.2, 5.6, 6.2, 6.3, 6.4, 6.5, 6.6, 7.1, 7.2, 7.3, 8.1.3, 8.4.1, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6 | All products |
| 2(b) | provide alternatives to speech and vocal input for communication, operation control and orientation | 5.2, 5.3, 5.6.2, 6, 8.1.2  (All of 6) | Products that use speech |
| 2(c) | provide for flexible magnification, brightness and contrast for communication, information and operation, as well as ensure interoperability with programmes and assistive devices to navigate the interface; | 5.1.4  11.1.4.3  11.1.4.4  8.1.2 | Products that use visual elements |
| 2(d) | provide an alternative to colour | 8.1.3  11.1.4.1 | Products that use colour to convey information, indicate an action, require a response or identify elements, |
| 2(e) | provide an alternative to audible signals | 5.1.5 | Products that use audible signals to convey information, indicate an action, require a response or identify |
| 2(f) | flexible ways of improving vision clarity | 9.1.4, 11.1.4 | Products that use visual elements |
| 2(g) | provide for user control of volume and speed, and enhanced audio features  including the reduction of interfering audio signals from surrounding products and audio clarity | 5.1.3.4 | Products that uses audio |
| 2(h) | provide for sequential control and alternatives to fine motor control, avoiding the need for simultaneous controls for manipulation, and shall use tactile discernible parts | 5.5.1, 5.6.1 | Products that require manual operation |
| 2(i) | avoid modes of operation requiring extensive reach and great strength | 8.3.1, 8.3.2, 8.3.3, 8.4.2.2 | All products |
| 2(j) | avoid triggering photosensitive seizures | 9.2.3.1 |  |
| 2(k) | protect the user’s privacy when he or she uses the accessibility features | 5.1.3.9 | All products |
| 2(l) | provide an alternative to biometrics identification and control | 5.3 | All products |
| 2(m) | shall ensure the consistency of the functionality and shall provide enough, and flexible amounts of, time for interaction | 9.2.2, 11.2.2 | All products |
| 2(n) | provide software and hardware for interfacing with the assistive technologies | 5.1.3.2 | All products |

Table ZB.2 Relationship between the present document and the general accessibility requirements related to all services covered by Directive 2019/882/EU in accordance with Article 2(2) (Directive 2019/882/EU, Annex 1, Section III)

| Essential requirements of Directive:  Annex I Section III | Description | Clause(s) of the present document | Services |
| --- | --- | --- | --- |
| (a) | ensuring the accessibility of the products used in the provision of the service, in accordance with Section I of this  Annex | All the clauses referenced in Table ZB.1 | All services |
| (b) | providing information about the functioning of the service, and where products are used in the provision of the  service, its link to these products as well as information about their accessibility characteristics and interoperability  with assistive devices (except for non-digital information) | 12 | All services |
| (c) | making websites, including the related online applications, and mobile device-based services, including mobile  applications, accessible in a consistent and adequate way by making them perceivable, operable, understandable  and robust | 9 | All services |

Table ZB.3 Relationship between the present document and the additional accessibility requirements related to specific services (Directive 2019/882/EU, Annex 1, Section IV)

| Essential requirements of Directive:  Annex I Section IV | Description | Clause(s) of the present document | Services |
| --- | --- | --- | --- |
| (a)(i) | providing real time text in addition to voice communication | 6.2, 13 | Electronic communications services, including emergency communications referred to in Article 109(2) of Directive  (EU) 2018/1972 |
| (a)(ii) | providing total conversation where video is provided in addition to voice communication | 6, 13 | Electronic communications services, including emergency communications referred to in Article 109(2) of Directive  (EU) 2018/1972 |
| (a)(iii) | ensuring that emergency communications using voice, text (including real time text) is synchronised and where  video is provided is also synchronised as total conversation and is transmitted by the electronic communications  service providers to the most appropriate PSAP | 6, 13.2 | Electronic communications services, including emergency communications referred to in Article 109(2) of Directive  (EU) 2018/1972 |
| (b)(i) | providing electronic programme guides (EPGs) which are perceivable, operable, understandable and robust and provide information about the availability of accessibility | NN | Services providing access to audiovisual media services |
| (b)(ii) | ensuring that the accessibility components (access services) of the audiovisual media services such as subtitles for the deaf and hard of hearing, audio description, spoken subtitles and sign language interpretation are fully transmitted with adequate quality for accurate display, and synchronised with sound and video, while allowing for user control of their display and use | NN | Services providing access to audiovisual media services |
| (e)(i) | providing identification methods, electronic signatures, security, and payment services which are perceivable, operable, understandable and robust | NN | Consumer banking services |
| (g)(i) | providing the information concerning accessibility of the products and services being sold when this information is provided by the responsible economic operator | NN | E-Commerce services |
| (g)(ii) | ensuring the accessibility of the functionality for identification, security and payment when delivered as part of a service instead of a product by making it perceivable, operable, understandable and robust | NN | E-Commerce services |
| g(iii) | providing identification methods, electronic signatures, and payment services which are perceivable, operable, understandable and robust | NN | E-Commerce services |

# Annex F (informative): Change history

| Version | Information about changes |
| --- | --- |
| 2.1.2 | First publication as a harmonised standard |
| 3.1.1 | The requirements related to Real-Time Text (RTT) in clause 6.2 have been revised and extended |
| 3.1.1 | The WCAG 2.1 AAA Success Criteria that were previously in an Annex D are now included in clause 9.5 |
| 3.1.1 | A new Annex D, "Further resources for cognitive accessibility", has been added |
| 3.1.1 | A new Annex E "Guidance for users of the present document" has been added |
| 3.2.1 | A new Annex F "Change history" (this Annex) has been added |

# History

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| --- | --- | --- |
| **Document history** | | |
| V1.1.1 | February 2014 | Publication |
| V1.1.2 | April 2015 | Publication |
| V2.1.2 | August 2018 | Publication |
| V3.1.1 | November 2019 | Publication |
| V3.2.1 | December 2020 | EN Approval Procedure AP 20210310: 2020-12-10 to 2021-03-10 |
| V3.2.1 | March 2021 | Publication |