Generated 2022-05-31

ICT Accessibility Requirements (Based on EN 301 549 v2.1.2)

What is ICT?

Information and Communications Technology (ICT) includes hardware, software, voice communication, video capabilities and digital content (including web and non-web based information).

What is ICT accessibility and why is it important?

"ICT accessibility ensures that people with and without disabilities can access the same information, perform the same tasks, and receive the same services using information technology. It is the digital equivalent to accessibility in the physical environment —the curb cuts, ramps, railings, etc., of the digital age. While ICT accessibility can provide usability benefits to everyone who uses ICT, it is a vital necessity to many people with disabilities." - NASCIO - Accessibility in IT Procurement

About this document

This document lists relevant ICT accessibility requirements from the EN 301 549 v2.1.2 (2018-08) Harmonised European Standard "Accessibility requirements for ICT products and services", which includes the Web Content Accessibility Guidelines (WCAG) 2.1 level AA.

At first glance, some requirements may appear to be unrelated to this product or service. They have been included for consideration since the full feature set of a Vendor’s product or service may not be known. For example, a video may be embedded into product documentation, so accessibility requirements for video and audio may become relevant.

Appendices include definitions, references, and practical guidance on creating accessible documentation.

Sources used to compile this document

- EN 301 549 v2.12 (2018-08) Harmonised European Standard "Accessibility requirements for ICT products and services" (PDF)
- Web Content Accessibility Guidelines (WCAG) 2.1 (W3C Recommendation 05 June 2018)
- Understanding WCAG 2.1 (Updated 16 November 2018)
- How to Meet WCAG 2.1 (Quick Reference)
- VPAT® 2.3 EU

Part A - Functional performance statements

These are explanatory (non-testable) statements that introduce the core aspects that the offered product or service must provide to be considered accessible.

4.2.1. Usage without vision: Where ICT provides visual modes of operation, some users need ICT to provide at least one mode of operation that does not require vision.

- 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, some users will need the ICT to provide features that enable users to make better use of their limited vision.

- 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, some users will need the ICT to provide a visual mode of operation that does not require user perception of colour.

- 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, some users need ICT to provide at least one mode of operation that does not require hearing.

- NOTE: Visual and tactile user interfaces may contribute towards meeting this clause.

4.2.5. Usage with limited hearing: Where ICT provides auditory modes of operation, some users will need the ICT to provide enhanced audio features.

- NOTE 1: Enhancement of the audio clarity, reduction of background noise, increased range of volume and greater volume in the higher frequency range can contribute towards meeting this clause.
- NOTE 2: Users with limited hearing may also benefit from non-hearing access (see clause 4.2.4).

4.2.6. Usage without vocal capability: Where ICT requires vocal input from users, some users will need the ICT to provide at least one mode of operation that does not require them to generate vocal output.

- NOTE 1: This clause covers the alternatives to the use of orally-generated sounds, including speech, whistles, clicks, etc.
- 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, some users will need the ICT to provide features that enable users to make use of the ICT through alternative actions not requiring manipulation or hand strength.

- 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, the operational elements will need to be within reach of all users.

- NOTE: 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.

4.2.9. Minimize photosensitive seizure triggers: Where ICT provides visual modes of operation, some users need ICT to provide at least one mode of operation that minimizes the potential for triggering photosensitive seizures.

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

4.2.10. Usage with limited cognition: Some users will need the ICT to provide features that make it simpler and easier to use.

- NOTE 1: This clause is intended to include the needs of persons with limited cognitive, language and learning abilities.
- NOTE 2: Adjustable timings, error indication and suggestion, and a logical focus order are examples of design features that may contribute towards meeting this clause.

4.2.11. Privacy: Where ICT provides features that are provided for accessibility, some users will need their privacy to be maintained when using those ICT features that are provided for accessibility.

- 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.

Part B - Functional accessibility requirements

Explanation of the table columns

- **"EN 301 549 clause"** includes all clauses of the EN 301 549 v2.12 that may apply to the ICT product or service. If WCAG 2.1 is referenced, we include the full text of the WCAG success criterion along with links to the criterion, “Understanding the requirement”, “How to meet the requirement” and definitions of standardized words.
- **"Determination of compliance"** describes how to test if you have met the requirement. These are copied from EN 301 549 v2.12 Annex C.

Scope

The following Functional Accessibility Requirements are applicable to the Functional Performance Statements in Part A. If a solution meets all of these it is considered to have met the Functional Performance Statements and is therefore deemed to conform with EN 301 549 v2.12.

Clauses 5, 5.1, 5.1.1, 5.1.2, 5.1.2.1, 5.1.2.2, 5.1.3, 5.1.3.1, 5.1.3.2, 5.1.3.3, 5.1.3.4, 5.1.3.5, 5.1.3.6, 5.1.3.7, 5.1.3.8, 5.1.3.9, 5.1.3.10, 5.1.3.11, 5.1.3.12, 5.1.3.13, 5.1.3.14, 5.1.3.15, 5.1.3.16, 5.1.4, 5.1.5, 5.1.6, 5.1.6.1, 5.1.6.2, 5.2, 5.3, 5.4, 5.5, 5.5.1, 5.5.2, 5.6, 5.6.1, 5.6.2, 5.7, 5.8, 5.9, 6, 6.1, 6.2, 6.2.1, 6.2.1.1, 6.2.1.2, 6.2.2, 6.2.2.1, 6.2.2.2, 6.2.3, 6.2.4, 6.3, 6.4, 6.5, 6.5.1, 6.5.2, 6.5.3, 6.5.4, 6.6, 7, 7.1, 7.1.1, 7.1.2, 7.1.3, 7.2, 7.2.1, 7.2.2, 7.2.3, 7.3, 8, 8.1, 8.1.1, 8.1.2, 8.1.3, 8.2, 8.2.1, 8.2.1.1, 8.2.1.2, 8.2.2, 8.2.2.1, 8.2.2.2, 8.3, 8.3.1, 8.3.2, 8.3.2.1, 8.3.2.2, 8.3.2.3, 8.3.2.3.1, 8.3.2.3.2, 8.3.2.3.3, 8.3.2.4, 8.3.2.5, 8.3.2.6, 8.3.3, 8.3.3.1, 8.3.3.1.1, 8.3.3.1.2, 8.3.3.1.3, 8.3.3.1.3.1, 8.3.3.1.3.2, 8.3.3.1.3.3, 8.3.3.2, 8.3.3.2.1, 8.3.3.2.2, 8.3.3.2.3, 8.3.3.2.3.1, 8.3.3.2.3.2, 8.3.4, 8.3.5, 8.4, 8.4.1, 8.4.2, 8.4.2.1, 8.4.2.2, 8.4.3, 8.5, 9, 9.0, 9.1, 9.1.1, 9.1.1.1, 9.1.2, 9.1.2.1, 9.1.2.2, 9.1.2.3, 9.1.2.4, 9.1.2.5, 9.1.3, 9.1.3.1, 9.1.3.2, 9.1.3.3, 9.1.3.4, 9.1.3.5, 9.1.4, 9.1.4.1, 9.1.4.2, 9.1.4.3, 9.1.4.4, 9.1.4.5, 9.1.4.10, 9.1.4.11, 9.1.4.12, 9.1.4.13, 9.2, 9.2.1, 9.2.1.1, 9.2.1.2, 9.2.1.4, 9.2.2, 9.2.2.1, 9.2.2.2, 9.2.3, 9.2.3.1, 9.2.4, 9.2.4.1, 9.2.4.2, 9.2.4.3, 9.2.4.4, 9.2.4.5, 9.2.4.6, 9.2.4.7, 9.2.5, 9.2.5.1, 9.2.5.2, 9.2.5.3, 9.2.5.4, 9.3, 9.3.1, 9.3.1.1, 9.3.1.2, 9.3.2, 9.3.2.1, 9.3.2.2, 9.3.2.3, 9.3.2.4, 9.3.3, 9.3.3.1, 9.3.3.2, 9.3.3.3, 9.3.3.4, 9.4, 9.4.1, 9.4.1.1, 9.4.1.2, 9.4.1.3, 9.5, 10, 10.0, 10.1, 10.1.1, 10.1.1.1, 10.1.2, 10.1.2.1, 10.1.2.2, 10.1.2.3, 10.1.2.4, 10.1.2.5, 10.1.3, 10.1.3.1, 10.1.3.2, 10.1.3.3, 10.1.3.4, 10.1.3.5, 10.1.4, 10.1.4.1, 10.1.4.2, 10.1.4.3, 10.1.4.4, 10.1.4.5, 10.1.4.10, 10.1.4.11, 10.1.4.12, 10.1.4.13, 10.2, 10.2.1, 10.2.1.1, 10.2.1.2, 10.2.1.4, 10.2.2, 10.2.2.1, 10.2.2.2, 10.2.3, 10.2.3.1, 10.2.4, 10.2.4.2, 10.2.4.3, 10.2.4.4, 10.2.4.6, 10.2.4.7, 10.2.5, 10.2.5.1, 10.2.5.2, 10.2.5.3, 10.2.5.4, 10.3, 10.3.1, 10.3.1.1, 10.3.1.2, 10.3.2, 10.3.2.1, 10.3.2.2, 10.3.3, 10.3.3.1, 10.3.3.2, 10.3.3.3, 10.3.3.4, 10.4, 10.4.1, 10.4.1.1, 10.4.1.2, 10.5, 10.6, 11, 11.0, 11.1, 11.1.1, 11.1.1.1, 11.1.1.1.1, 11.1.1.1.2, 11.1.2, 11.1.2.1, 11.1.2.1.1, 11.1.2.1.2, 11.1.2.1.2.1, 11.1.2.1.2.2, 11.1.2.2, 11.1.2.3, 11.1.2.3.1, 11.1.2.3.2, 11.1.2.4, 11.1.2.5, 11.1.3, 11.1.3.1, 11.1.3.1.1, 11.1.3.1.2, 11.1.3.2, 11.1.3.2.1, 11.1.3.2.2, 11.1.3.3, 11.1.3.4, 11.1.3.5, 11.1.4, 11.1.4.1, 11.1.4.2, 11.1.4.3, 11.1.4.4, 11.1.4.4.1, 11.1.4.4.2, 11.1.4.5, 11.1.4.5.1, 11.1.4.5.2, 11.1.4.10, 11.1.4.10.1, 11.1.4.10.2, 11.1.4.11, 11.1.4.12, 11.1.4.13, 11.2, 11.2.1, 11.2.1.1, 11.2.1.1.1, 11.2.1.1.2, 11.2.1.2, 11.2.1.4, 11.2.1.4.1, 11.2.1.4.2, 11.2.2, 11.2.2.1, 11.2.2.2, 11.2.3, 11.2.3.1, 11.2.4, 11.2.4.3, 11.2.4.4, 11.2.4.6, 11.2.4.7, 11.2.5, 11.2.5.1, 11.2.5.2, 11.2.5.3, 11.2.5.4, 11.3, 11.3.1, 11.3.1.1, 11.3.1.1.1, 11.3.1.1.2, 11.3.2, 11.3.2.1, 11.3.2.2, 11.3.3, 11.3.3.1, 11.3.3.1.1, 11.3.3.1.2, 11.3.3.2, 11.3.3.3, 11.3.3.4, 11.4, 11.4.1, 11.4.1.1, 11.4.1.1.1, 11.4.1.1.2, 11.4.1.2, 11.4.1.2.1, 11.4.1.2.2, 11.5, 11.5.1, 11.5.2, 11.5.2.1, 11.5.2.2, 11.5.2.3, 11.5.2.4, 11.5.2.5, 11.5.2.6, 11.5.2.7, 11.5.2.8, 11.5.2.9, 11.5.2.10, 11.5.2.11, 11.5.2.12, 11.5.2.13, 11.5.2.14, 11.5.2.15, 11.5.2.16, 11.5.2.17, 11.6, 11.6.1, 11.6.2, 11.7, 11.8, 11.8.1, 11.8.2, 11.8.3, 11.8.4, 11.8.5, 12, 12.1, 12.1.1, 12.1.2, 12.2, 12.2.1, 12.2.2, 12.2.3, 12.2.4, 13, 13.1, 13.1.1, 13.1.2, 13.1.3, 13.1.4, 13.1.5, 13.1.6, 13.2 and 13.3 have been deemed relevant to this ICT.

EN 301 549 clause	Determination of compliance
5 Generic requirements	---

EN 301 549 clause	Determination of compliance
5.1 Closed functionality	---
5.1.1 Introduction (informative) ICT has closed functionality 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.	**C.5.1.1 Introduction (informative)** Clause 5.1.1 is informative and does not contain requirements that require testing.
5.1.2 General	---
5.1.2.1 Closed functionality Where ICT has closed functionality, it shall meet the requirements set out in clauses 5.2 to 13, as applicable. NOTE 1: ICT may close some, but not all, of its functionalities. Only the closed functionalities have to conform to the requirements of clause 5.1. NOTE 2: The provisions within this clause are requirements for the closed functionality of ICT that replace those requirements 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).	**C.5.1.2.1 Closed functionality** ICT with closed functionality shall meet the requirements set out in clauses C.5.2 to C.13, as applicable.
5.1.2.2 Assistive technology Where ICT has closed functionality, that closed functionality shall be operable without requiring the user to attach, connect or install assistive technology and shall conform to the generic requirements of clauses 5.1.3 to 5.1.6 as applicable. Personal headsets and induction loops shall not be classed as assistive technology for the purpose of this clause.	**C.5.1.2.2 Assistive technology** Type of assessment Testing Pre-conditions 1. The ICT has closed functionality. Procedure 1. Determine the closed functions of the ICT.

EN 301 549 clause	Determination of compliance
	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 except personal headsets or inductive loops. Result Pass: Check 2 is true Fail: Check 2 is false
5.1.3 Non-visual access	---
5.1.3.1 General Where visual information is needed to enable the use of those functions of ICT that are closed to assistive technologies for screen reading, ICT shall provide at least one mode of operation using non-visual access to enable the use of those functions. NOTE 1: Non-visual access may be in an audio form, including speech, or a tactile form. 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.	**C.5.1.3.1 General** Type of assessment Testing Pre-conditions 1. Visual information is needed to enable the use of those functions of the ICT that are closed to assistive technology for screen reading. Procedure 1. Determine the functions of the ICT closed to screen reading. 2. Check that they are all operable using non-visual access. Result Pass: Check 2 is true Fail: Check 2 is false
5.1.3.2 Auditory output delivery including speech Where auditory output is provided as non-visual access to closed functionality, the auditory output shall be delivered: a. either directly by a mechanism included in or provided with the ICT; or b. by a personal headset that can be connected through a 3,5 mm audio jack, or an industry standard connection, without requiring the use of vision.	**C.5.1.3.2 Auditory output delivery including speech** Type of assessment Inspection Pre-conditions 1. Auditory output is provided as non-visual access to closed functionality. Procedure

EN 301 549 clause	Determination of compliance
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.	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 or an industry standard connection without requiring the use of vision. Result Pass: Check 1 or 2 is true Fail: Checks 1 and 2 are false
5.1.3.3 Auditory output correlation Where auditory output is provided as non-visual access to closed functionality, and where 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 legally blind 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.	**C.5.1.3.3 Auditory output correlation** Clause 5.1.3.3 is informative only and contains no requirements requiring test
5.1.3.4 Speech output user control Where 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.	**C.5.1.3.4 Speech output user control** Type of assessment Inspection Pre-condition 1. 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.

EN 301 549 clause	Determination of compliance
	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
5.1.3.5 Speech output automatic interruption Where 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.	**C.5.1.3.5 Speech output automatic interruption** Type of assessment Inspection Pre-conditions 1. 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
5.1.3.6 Speech output for non-text content Where ICT presents non-text content, 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 2.1 Success Criterion 1.1.1 Non-text content.	**C.5.1.3.6 Speech output for non-text content** Type of assessment Testing Pre-conditions 1. Non-text content is presented to users via speech output. Procedure

EN 301 549 clause	Determination of compliance
	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 2.1 Success Criterion 1.1.1 Non-text content. 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
5.1.3.7 Speech output for video information Where pre-recorded video content is needed to enable the use of closed functions of ICT and where 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 or an auditory transcript of the video content.	**C.5.1.3.7 Speech output for video information** Type of assessment Testing Pre-conditions 1. Pre-recorded video content is needed to enable the use of closed functions of ICT. 2. 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
5.1.3.8 Masked entry Where auditory output is provided as non-visual access to closed functionality, and the characters displayed are masking characters, the	**C.5.1.3.8 Masked entry** Type of assessment

EN 301 549 clause	Determination of compliance
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, 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.	Testing Pre-conditions 1. Auditory output is provided as non-visual access to closed functionality. 2. The characters displayed are masking characters. 3. The user does not explicitly choose to allow non-private auditory output. 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. 3. If 1 and 2 are false, check that the user has explicitly chosen to allow non-private auditory output. Result Pass: Any check is true Fail: All checks are false
5.1.3.9 Private access to personal data Where 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 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.	**C.5.1.3.9 Private access to personal data** Type of assessment Testing Pre-conditions 1. Auditory output is provided as non-visual access to closed functionality. 2. The output contains data. 3. There is an applicable privacy policy which considers that data to be private. Procedure

EN 301 549 clause	Determination of compliance
	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 any other mechanism that can be chosen by the user. Result Pass: Checks 1 and 2 or 3 are true Fail: Checks 1 or 2 and 3 are false
5.1.3.10 Non-interfering audio output Where 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.	**C.5.1.3.10 Non-interfering audio output** Type of assessment Testing Pre-conditions 1. Auditory output is provided as non-visual access to closed functionality. 2. 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
5.1.3.11 Private listening volume Where auditory output is provided as non-visual access to closed functionality and is delivered through a mechanism for private listening, ICT shall provide at least one non-visual mode of operation for controlling the volume.	**C.5.1.3.11 Private listening volume** Type of assessment Inspection Pre-conditions 1. The auditory output is provided as non-visual access to closed functionality.

EN 301 549 clause	Determination of compliance
	2. 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
5.1.3.12 Speaker volume Where auditory output is provided as non-visual access to closed functionality and is delivered through speakers on 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.	**C.5.1.3.12 Speaker volume** Type of assessment Inspection and measurement Pre-conditions 1. The auditory output is provided as non-visual access to closed functionality. 2. The auditory output is delivered through speakers. 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
5.1.3.13 Volume reset Where 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.	**C.5.1.3.13 Volume reset** Type of assessment Inspection and measurement Pre-conditions

EN 301 549 clause	Determination of compliance
NOTE: A feature to disable the volume reset function may be provided in order to enable the single-user exception to be met.	1. The auditory output is provided as non-visual access to closed functionality. 2. The ICT is not dedicated to a single user. Procedure 1. Check that a function that automatically resets the volume to be at a level of 65 dBA or less after every use is provided. Result Pass: Check 1 is true Fail: Check 1 is false
5.1.3.14 Spoken languages Where speech output is provided as non-visual access to closed functionality, speech output shall be in the same human language as the displayed content provided, except: a. 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; b. where the content is generated externally and not under the control of the ICT vendor, clause 5.1.3.14 shall not be required to apply for languages not supported by the ICT's speech synthesizer; c. for displayed languages that cannot be selected using non-visual access; d. where the user explicitly selects a speech language that is different from the language of the displayed content.	**C.5.1.3.14 Spoken languages** Type of assessment Testing Pre-conditions 1. The speech output is provided as non-visual access to closed functionality. 2. 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. 3. The content is not generated externally and is under the control of the ICT vendor. 4. The displayed languages can be selected using non-visual access. 5. 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

EN 301 549 clause	Determination of compliance
	Fail: Check 1 is false
5.1.3.15 Non-visual error identification Where speech output is provided as non-visual access to closed functionality and an input error is automatically detected, speech output shall identify and describe the item that is in error.	**C.5.1.3.15 Non-visual error identification** Type of assessment Testing Pre-conditions 1. Speech output is provided as non-visual access to closed functionality. 2. 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
5.1.3.16 Receipts, tickets, and transactional outputs Where ICT is closed to visual access and provides receipts, tickets or other outputs as a result of a self-service transaction, speech output shall be provided which shall include all information necessary to complete or verify the transaction. In the case of ticketing machines, printed copies of itineraries and maps shall not be required to be audible. NOTE: The speech output may be provided by any element of the total ICT system.	**C.5.1.3.16 Receipts, tickets, and transactional outputs** Type of assessment Testing Pre-conditions 1. The ICT is closed to visual access. 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 copies of itineraries and maps. Procedure 1. Check that speech output is provided which includes all information necessary to complete or verify the transaction. Result

EN 301 549 clause	Determination of compliance
	Pass: Check 1 is true Fail: Check 1 is false
5.1.4 Functionality closed to text enlargement Where any functionality of ICT is closed to the text enlargement features of platform or assistive technology, 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: $\Psi = (180 \times H) / (\pi \times D)$ 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 1 illustrate the relationship between the maximum viewing distance and minimum character height at the specified minimum subtended angle. (See Table 5.1 and Figure 1)	**C.5.1.4 Functionality closed to text enlargement** Type of assessment Inspection and measurement Pre-conditions 1. A functionality of the ICT is closed to enlargement features of platform or assistive technology. 2. 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
5.1.5 Visual output for auditory information Where pre-recorded auditory information is needed to enable the use of closed functions of ICT, the ICT shall provide visual information that is equivalent to the pre-recorded auditory output. NOTE: This visual information can take the form of captions or text transcripts	**C.5.1.5 Visual output for auditory information** Type of assessment Inspection Pre-conditions 1. Pre-recorded auditory information is needed to enable the use of closed functions of ICT. Procedure

EN 301 549 clause	Determination of compliance
	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
5.1.6 Operation without keyboard interface	---
5.1.6.1 Closed functionality Where ICT functionality is closed to keyboards or keyboard interfaces, all functionality shall be operable without vision as required by clause 5.1.3.	**C.5.1.6.1 Closed functionality** Type of assessment Inspection Pre-conditions 1. 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
5.1.6.2 Input focus Where ICT functionality is closed to keyboards or keyboard interfaces and where input focus can be moved to a user interface element, 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.	**C.5.1.6.2 Input focus** Type of assessment Inspection Pre-conditions 1. ICT functionality is closed to keyboards or keyboard interfaces. 2. 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

EN 301 549 clause	Determination of compliance
	Pass: Check 1 is true Fail: Check 1 is false
5.2 Activation of accessibility features Where ICT has documented 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.	**C.5.2 Activation of accessibility features** Type of assessment Inspection Pre-conditions 1. The ICT has documented accessibility features to meet a specific need. 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
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.	**C.5.3 Biometrics** **Type of assessment** **Test 1** Pre-conditions 1. The ICT uses biological characteristic for user identification. Procedure 1. Check that more than one means can be used for user identification. Result Pass: Check 1 is true Fail: Check 1 is false **Type of assessment** **Test 2**

EN 301 549 clause	Determination of compliance
	Pre-conditions 1. The ICT uses biological characteristic for control of ICT. Procedure 1. Check that more than one means can be used for control of ICT. Result Pass: Check 1 is true Fail: Check 1 is false
5.4 Preservation of accessibility information during conversion Where ICT converts information or communication it shall preserve all documented non-proprietary information that is provided for accessibility, to the extent that such information can be contained in or supported by the destination format.	**C.5.4 Preservation of accessibility information during conversion** Type of assessment Inspection Pre-conditions 1. The non-proprietary information provided for accessibility is documented. 2. The ICT converts information or communication. 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
5.5 Operable parts	---
5.5.1 Means of operation	**C.5.5.1 Means of operation** Type of assessment

EN 301 549 clause	Determination of compliance
Where ICT has operable parts 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.	Testing Pre-conditions The ICT has operable parts 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
5.5.2 Operable parts discernibility Where ICT has operable parts, it shall provide a means to discern each operable part, without requiring vision and without performing the action associated with the operable part. NOTE: One way of meeting this requirement is by making the operable parts tactilely discernible.	**C.5.5.2 Operable parts discernibility** Type of assessment Testing Pre-conditions The ICT has operable parts. 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
5.6 Locking or toggle controls	---
5.6.1 Tactile or auditory status Where ICT has a locking or toggle control and that control is visually presented to the user, the ICT shall provide at least one mode of operation	**C.5.6.1 Tactile or auditory status** Type of assessment

EN 301 549 clause	Determination of compliance
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.	Inspection Pre-conditions 1. The ICT has a locking or toggle control. 2. The locking or toggle control is visually presented to the user. 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
5.6.2 Visual status Where ICT has a locking or toggle control and the control is non-visually presented to the user, 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.	**C.5.6.2 Visual status** Type of assessment Inspection Pre-conditions 1. The ICT has a locking or toggle control. 2. The locking or toggle control is presented to the user. 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
5.7 Key repeat Where ICT has a key repeat function that cannot be turned off:	**C.5.7 Key repeat** Type of assessment

EN 301 549 clause	Determination of compliance
a. the delay before the key repeat shall be adjustable to at least 2 seconds; and b. the key repeat rate shall be adjustable down to one character per 2 seconds.	Testing Pre-conditions 1. The ICT has a key repeat function A keyboard or keypad with key repeat is provided. 2. The key repeat cannot be turned off. 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
5.8 Double-strike key acceptance Where ICT has 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	**C.5.8 Double-strike key acceptance** Type of assessment Testing Pre-conditions 1. The ICT has a keyboard or keypad A keyboard or keypad is provided. 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.

EN 301 549 clause	Determination of compliance
	Result Pass: Check 1 is true and check 5 is false Fail: Check 1 is false or check 5 is true
5.9 Simultaneous user actions Where ICT uses simultaneous user actions for its operation, such 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.	**C.5.9 Simultaneous user actions** Type of assessment Inspection Pre-conditions None. Procedure 1. If there are multiple modes of operation, select one mode of operation (see notes 1 and 2 of this table for guidance on the selection). 2. Determine all the user controllable functions of the ICT. 3. Check that each user controllable function can be operated with a single point of contact. 4. If there are multiple modes of operation and the test is not passed, repeat the procedure until all modes of operation have been tested. Result Pass: Check 3 is true Fail: Check 3 is false for all modes of operation. NOTE 1: If there are multiple modes of operation, these should be tested until the compliance test is passed. NOTE 2: Where it is claimed that a specific mode complies with clause 5.6, this mode should be tested first.
6 ICT with two-way voice communication	---
6.1 Audio bandwidth for speech Where ICT provides two-way voice communication, in order to provide good audio quality, that ICT shall be able to encode and decode two-way voice	**C.6.1 Audio bandwidth for speech** Type of assessment Measurement

EN 301 549 clause	Determination of compliance
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.	Pre-conditions 1. The ICT under test provides two-way voice communication. 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
6.2 Real-time text (RTT) functionality	---
6.2.1 RTT provision	---
6.2.1.1 RTT communication Where ICT supports two-way voice communication in a specified context of use, the ICT shall allow a user to communicate with another user by RTT. NOTE 1: The RTT capability can be provided as a factory default or added later. NOTE 2: Provision of RTT may require additional service provision, additional hardware and/or software which may be provided separately or together.	**C.6.2.1.1 RTT communication** Type of assessment Inspection Pre-conditions 1. The ICT system under test allows two-way voice communication. 2. A "reference" RTT-capable device compatible with the system is connected at the other end of the system. Procedure 1. Check that the ICT allows a user to communicate with the "reference" ICT by RTT. Result Pass: Check 1 is true Fail: Check 1 is false
6.2.1.2 Concurrent voice and text Where ICT supports two-way voice communication in a specified context of use, and enables a user to communicate with another user by RTT, it shall	**C.6.2.1.2 Concurrent voice and text** Type of assessment Inspection

EN 301 549 clause	Determination of compliance
provide a mechanism to select a mode of operation which allows concurrent voice and text. NOTE: The availability of voice and RTT running concurrently can allow the RTT to replace or support voice and transfer additional information such as numbers, currency amounts and spelling of names.	Pre-conditions 1. The ICT supports two-way voice communication. 2. The ICT enables a user to communicate with another user by RTT. Procedure 1. Check that the ICT provides a mechanism to select a mode of operation which allows concurrent voice and text. 2. Check that ICT allows the concurrent use of voice and text when in the mode of operation identified in step 1. Result Pass: Checks 1 and 2 are true
6.2.2 Display of Real-time Text	---
6.2.2.1 Visually distinguishable display Where ICT has RTT send and receive capabilities, displayed sent text shall be visually differentiated from and separated from received text.	**C.6.2.2.1 Visually distinguishable display** Type of assessment Inspection Pre-conditions 1. The ICT under test has RTT send and receive capabilities. 2. The ICT supports RTT mechanism(s). 3. A "reference" RTT-capable terminal using mechanisms supported by the ICT system is connected at the other end of the system to the ICT under test. Procedure 1. The ICT under test is connected to the ICT system terminated by the "reference" terminal. 2. The different elements of the ICT are in an operational status (the connection is active and the terminals are in the relevant RTT mode) and the two terminals are communicating to each other. 3. A Short text sequence is sent by the ICT under test. 4. A Short text sequence is sent by the "reference" terminal.

EN 301 549 clause	Determination of compliance
	5. Check, on the ICT under test, that displayed sent text is visually differentiated from and separated from received text. Result Pass: Check 5 is true Fail: Check 5 is false NOTE: A "reference" terminal is a terminal having RTT send and receive capabilities that uses the RTT mechanisms supported by the ICT system. This "reference" terminal is the responsibility of the test laboratory.
6.2.2.2 Programmatically determinable send and receive direction Where ICT has RTT send and receive capabilities, the send/receive direction of transmitted text shall be programmatically determinable, unless the RTT has closed functionality. NOTE: The intent of this clause is to enable screen readers to be able to distinguish between incoming text and outgoing text when used with RTT functionality.	**C.6.2.2.2 Programmatically determinable send and receive direction** Type of assessment Inspection Pre-conditions 1. The ICT under test has RTT send and receive capabilities. 2. The RTT is open functionality. 3. A "reference" RTT-capable terminal using mechanisms supported by the ICT network is connected at the other end of an ICT system to the ICT under test. Procedure 1. The ICT under test is connected to the ICT system terminated by the "reference" terminal. 2. The different elements of the ICT are in an operational status (the connection is active and the terminals are in the relevant RTT mode) and the two terminals are communicating to each other. 3. A Short text sequence is sent by the ICT under test. 4. A Short text sequence is sent by the "reference" terminal. 5. Check that the send/receive direction of transmitted text is programmatically determinable. Result

EN 301 549 clause	Determination of compliance
	Pass: Check 5 is true Fail: Check 5 is false NOTE: A "reference" terminal is a terminal having RTT send and receive capabilities that uses the RTT mechanisms supported by the ICT network. This "reference" terminal is the responsibility of the test laboratory.
6.2.3 Interoperability Where ICT with RTT functionality interoperates with other ICT with RTT functionality (as required by clause 6.2.1.1) they shall support at least one of the four RTT interoperability mechanisms described below: a. ICT interoperating over the Public Switched Telephone Network (PSTN), with other ICT that directly connects to the PSTN as described in Recommendation ITU-T V.18 [i.23] or any of its annexes for text telephony signals at the PSTN interface; b. ICT interoperating with other ICT using VOIP with Session Initiation Protocol (SIP) and using real-time text that conforms to IETF RFC 4103 [i.13]; c. ICT interoperating with other ICT using RTT that conforms with the IP Multimedia Sub-System (IMS) set of protocols specified in ETSI TS 126 114 [i.10], ETSI TS 122 173 [i.11] and ETSI TS 134 229 [i.12]; d. ICT interoperating with other ICT using a relevant and applicable common specification for RTT exchange that is published and available. This common specification shall include a method for indicating loss or corruption of characters.	**C.6.2.3 Interoperability** Type of assessment Test Pre-conditions 1. The ICT under test supports two-way voice communication. 2. The ICT under test has RTT functionality. Procedure 1. Check that the ICT interoperates over the Public Switched Telephone Network (PSTN), with other ICT that directly connects to the PSTN as described in Recommendation ITU-T V.18 [i.23] or any of its annexes for text telephony signals at the PSTN interface. 2. Check that the ICT interoperates with other ICT using VOIP with Session Initiation Protocol (SIP) and using real-time text that conforms to IETF RFC 4103 [i.13]. 3. Check that the ICT interoperates with other ICT using RTT that conforms with the IP Multimedia Sub-System (IMS) set of protocols specified in ETSI TS 126 114 [i.10], ETSI TS 122 173 [i.11] and ETSI TS 134 229 [i.12]. 4. Check that the ICT interoperates with other ICT using a relevant and applicable common specification that is published and available. 5. Check that the common specification in check 4 includes a method for indicating loss or corruption of characters. Result Pass: Check 1 or 2 or 3 or both 4 and 5 are true

EN 301 549 clause	Determination of compliance
	Fail: All of Checks 1, 2, 3 and at least one of 4 or 5 are false
6.2.4 Real-time text responsiveness Where ICT utilises RTT input, that RTT input shall be transmitted to the ICT network supporting RTT within 1 second of the input entry. NOTE 1: Input entry is considered to have occurred when sufficient user input has occurred for the ICT to establish which character(s) to send. NOTE 2: Input entry 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.	**C.6.2.4 Real-time text responsiveness** Type of assessment Inspection of Measurement data or Test Pre-conditions 1. The ICT under test has RTT send and receive capabilities. 2. A "reference" RTT-capable terminal using mechanisms supported by the ICT system is connected at the other end of an ICT system to the ICT under test. 3. The ICT under test is connected to the ICT system terminated by the "reference" terminal. 4. The different elements of the ICT are in a working status (the connection is active and the terminals are in the relevant RTT mode). Procedure 1. A short sequence is input to the terminal under test. 2. Check the time at which input entry has occurred. 3. Check the period between input entry to the ICT terminal under test and the time when the text is transmitted to the ICT network. Result Pass: Check 3 is less than or equal to 1 second Fail: Check 3 is greater than 1 second NOTE: As described in the notes to clause 6.2.4, the identification of when input entry has occurred may vary according to the type of RTT system under test.
6.3 Caller ID Where ICT provides caller identification or similar telecommunications functions are provided, the caller identification and similar telecommunications functions shall be available in text form and in at least one other modality.	**C.6.3 Caller ID** Type of assessment Inspection Pre-conditions

EN 301 549 clause	Determination of compliance
	1. The ICT provides caller identification, or similar telecommunications functions are provided. Procedure 1. Check that the information delivered by each function is available as text. 2. Check that the information delivered by each function is available in another modality. Result Pass: Both Checks 1 and 2 are true Fail: Check 1 or 2 is false
6.4 Alternatives to voice-based services Where ICT provides real-time voice-based communication and also provides voice mail, auto-attendant, or interactive voice response facilities, the ICT should 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: Solutions capable of handling audio, real-time text and video media could satisfy the above requirement.	**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. 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: Checks 1 and 2 are true Fail: Check 1 or 2 is false
6.5 Video communication	---
6.5.1 General (informative)	**C.6.5.1 General (informative)**

EN 301 549 clause	Determination of compliance
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 Common Intermediate Format (CIF) resolution, 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. When the resolution is reduced to Quarter Common Intermediate Format (QCIF) and the frame rate drops to 12 frames per second the communication is still usable with some restrictions. A lower resolution causes less disturbance to the perception of sign language and lip-reading than that caused by a lower frame rate. Delay can be a problem in video communication. Overall delay values below 0,4 s are preferred, with an increase in preference down to 0,1 s. Values over 0,8 s are felt to hinder a good sign conversation. 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.	Clause 6.5.1 is informative only and contains no requirements requiring test.
6.5.2 Resolution Where ICT that provides two-way voice communication includes real-time video functionality, the ICT: a. shall support at least QCIF resolution; b. should preferably support at least CIF resolution.	**C.6.5.2 Resolution** Type of assessment Inspection Pre-conditions 1. The ICT provides 2 way voice communication. 2. The ICT includes real-time video functionality. Procedure 1. Check that the video communication resolution is QCIF resolution or better. Result Pass: Check 1 is true Fail: Check 1 is false
6.5.3 Frame rate	**C.6.5.3 Frame rate** Type of assessment

EN 301 549 clause	Determination of compliance
Where ICT that provides two-way voice communication includes real-time video functionality, the ICT: a. shall support a frame rate of at least 12 frames per second (FPS); b. should preferably support a frame rate of at least 20 frames per second (FPS) with or without sign language in the video stream.	Inspection Pre-conditions 1. The ICT provides 2 way voice communication. 2. The ICT includes real-time video functionality. Procedure 1. Check that the video communication frame rate is equal to or higher than 12 frames per second. Result Pass: Check 1 is true Fail: Check 1 is false
6.5.4 Synchronization between audio and video Where ICT that provides two-way voice communication includes real-time video functionality, the ICT should ensure a maximum time difference of 100 ms between the speech and video presented to the user.	**C.6.5.4 Synchronization between audio and video** Type of assessment Measurement Pre-conditions 1. The ICT provides 2 way voice communication. 2. The ICT includes real-time video functionality. Procedure 1. Check that the time difference between the speech and video presented to the user is equal to or less than 100 ms. Result Pass: Check 1 is true Fail: Check 1 is false
6.6 Alternatives to video-based services Where ICT provides real-time video-based communication and also 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:	**C.6.6 Alternatives to video-based services** Clause 6.6 is advisory only and contains no requirements requiring test.

EN 301 549 clause	Determination of compliance
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 real-time text could satisfy the above requirement.	
7 ICT with video capabilities	---
7.1 Caption processing technology	---
7.1.1 Captioning playback Where ICT displays video with synchronized audio, it shall have a mode of operation to display the available captions. Where closed captions are provided as part of the content, the ICT shall allow the user to choose to display the captions. NOTE: Captions may contain information about timing, colour and positioning. This caption data is important 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.	**C.7.1.1 Captioning playback** Type of assessment Test 1 Pre-conditions 1. The ICT displays or processes video with synchronized audio. 2. Captions are provided in the video. Procedure 1. Check that there is a mechanism to display the captions. Result Pass: Check 1 is true Fail: Check 1 is false Type of assessment Test 2 Pre-conditions 1. The ICT displays or processes video with synchronized audio. 2. Closed captions are provided by the content. Procedure 1. Check that there is a mechanism to choose to display the captions. Result

EN 301 549 clause	Determination of compliance
	Pass: Check 1 is true Fail: Check 1 is false
7.1.2 Captioning synchronization Where ICT displays captions, the mechanism to display captions shall preserve synchronization between the audio and the corresponding captions.	**C.7.1.2 Captioning synchronization** Type of assessment Inspection Pre-conditions 1. The ICT has a mechanism to display captions. Procedure 1. Check that the mechanism to display the captions preserves the synchronization between the audio and corresponding captions. Result Pass: Check 1 is true Fail: Check 1 is false
7.1.3 Preservation of captioning Where ICT transmits, converts or records video with synchronized audio, it shall preserve caption data such that it can be displayed in a manner consistent with clauses 7.1.1 and 7.1.2. 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.	**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 data such that it can be displayed in a manner consistent with clauses 7.1.1 and 7.1.2. Result Pass: Check 1 is true Fail: Check 1 is false
7.2 Audio description technology	---
7.2.1 Audio description playback	**C.7.2.1 Audio description playback**

EN 301 549 clause	Determination of compliance
Where ICT displays video with synchronized audio, it shall provide a mechanism to select and play available audio description 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.	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. 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
7.2.2 Audio description synchronization Where ICT has a mechanism to play audio description, it shall preserve the synchronization between the audio/visual content and the corresponding audio description.	**C.7.2.2 Audio description synchronization** Type of assessment Inspection Pre-conditions 1. The ICT has a mechanism to play audio description. 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
7.2.3 Preservation of audio description	**C.7.2.3 Preservation of audio description** Type of assessment

EN 301 549 clause	Determination of compliance
Where ICT transmits, converts, or records video with synchronized audio, it shall preserve audio description data such that it can be played in a manner consistent with clauses 7.2.1 and 7.2.2.	Inspection Pre-conditions 1. The ICT transmits converts or records video with synchronized audio. Procedure 1. Check that the ICT preserves audio description data such that it can be played in a manner consistent with clauses 7.2.1 and 7.2.2. Result Pass: Check 1 is true Fail: Check 1 is false
7.3 User controls for captions and audio description Where ICT primarily displays materials containing video with associated audio content, user controls to activate subtitling and audio description shall be provided to the user at the same level of interaction (i.e. the number of steps to complete the task) as the primary media controls. NOTE 1: Primary media controls are the set of controls that the user most commonly uses to control media. NOTE 2: Products that have a general hardware volume control, such as a telephone, or a laptop which can be configured to display video through software but which is not its primary purpose, would not need dedicated hardware controls for captions and descriptions; however software controls, or hardware controls mapped through software, would need to be at the same level of interaction. NOTE 3: It is best practice for ICT to include additional controls enabling the user to select whether captions and audio description are turned on or off by default.	**C.7.3 User controls for captions and audio description** Type of assessment Inspection Pre-conditions 1. The ICT primarily display materials containing video with associated audio content. Procedure 1. Check that user controls to activate subtitling and audio descriptions are provided to the user at the same level of interaction as the primary media controls. Result Pass: Check 1 is true Fail: Check 1 is false
8 Hardware	---
8.1 General	---
8.1.1 Generic requirements The "generic requirements" of clause 5 also apply to ICT that is hardware.	**C.8.1.1 Generic requirements** Clause 8.1.1 contains no requirements requiring test.

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8.1.2 Standard connections Where an ICT provides user 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 formats are USB and Bluetooth.	**C.8.1.2 Standard connections** Type of assessment Inspection Pre-conditions 1. The ICT 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 NOTE: The connections may be physical or wireless connections.
8.1.3 Colour Where the ICT has hardware aspects that use colour, colour shall not be used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	**C.8.1.3 Colour** Type of assessment Inspection Pre-conditions 1. The hardware aspects of the ICT conveys visual information using colour coding as a means 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

EN 301 549 clause	Determination of compliance
8.2 Hardware products with speech output	---
8.2.1 Speech volume gain	---
8.2.1.1 Speech volume range Where ICT hardware has speech output, it 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.	**C.8.2.1.1 Speech volume range** Type of assessment Inspection based on measurement data Pre-conditions 1. The ICT hardware 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
8.2.1.2 Incremental volume control Where ICT hardware has speech output and its volume control is incremental, it shall provide at least one intermediate step of 12 dB gain above the lowest volume setting.	**C.8.2.1.2 Incremental volume control** Type of assessment Inspection based on measurement data Pre-conditions 1. The ICT hardware has speech output. 2. The volume control is incremental. Procedure 1. Measure the level (in dB) of the speech output at the lowest volume setting.

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	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
8.2.2 Magnetic coupling	---
8.2.2.1 Fixed-line devices Where ICT hardware is a fixed-line communication device with speech output and which is normally held to the ear and which carries the "T" symbol specified in ETSI ETS 300 381 [1], it shall provide a means of magnetic coupling which meets the requirements of ETSI ES 200 381-1 [2]. NOTE: ICT fulfilling the requirements of TIA-1083-A [i.24] is deemed to comply with the requirements of this clause.	**C.8.2.2.1 Fixed-line devices** Type of assessment Inspection based on measurement data Pre-conditions 1. The ICT hardware is a fixed line communication device with an audio output that is normally held to the ear. 2. The ICT carries the "T" symbol. 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. Result Pass: Check 1 or 2 is true Fail: Checks 1 and 2 are false
8.2.2.2 Wireless communication devices Where ICT hardware is a wireless communication device with speech output which is normally held to the ear, it 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.	**C.8.2.2.2 Wireless communication devices** Type of assessment Inspection based on measurement data Pre-conditions 1. The ICT hardware 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].

EN 301 549 clause	Determination of compliance
	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
8.3 Physical access to ICT	---
8.3.1 General (informative) Clauses 8.3.2 to 8.3.4 describe recommendations on those dimensions that are integral to the ICT (e.g. integral shelves, or integral cabins that may restrict access to the operable parts of the ICT). When ICT is installed, the dimensions of the surrounding space combined with the dimensions of the ICT might affect the physical access to the ICT. Accessible physical access of the ICT would be achieved if the installation instructions referred to in clause 8.3.5 are followed. It may not be possible to apply all recommendations of clause 8.3 to all aspects of maintenance, repair, or occasional monitoring of equipment in all circumstances. Nevertheless, it is best practice to apply the recommendations in clause 8.3, where feasible and safe to do so. NOTE 1: The dimensions set out in clause 8.3 are identical to those given in the American 2010 ADA standards for accessible design [i.25]. NOTE 2: Physical access to 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.	**C.8.3.1 General (informative)** Clause 8.3.1 is advisory only and contains no requirements requiring test. The tests in clause C.8.3 are made available to support the recommendations in clause 8.3. They should be applied if the recommendations in clause 8.3 are being followed. However, tests in clause C.8.3 do not form part of the compliance requirements and are not required in any compliance report.
8.3.2 Clear floor or ground space	---
8.3.2.1 Change in level Where there is a change in floor level that is integral to the ICT then it should be ramped with a slope no steeper than 1:48. Exceptions:	**C.8.3.2.1 Change in level** a) Type of assessment Inspection and measurement Pre-conditions

EN 301 549 clause	Determination of compliance
a. If the change in floor level is less than or equal to 6,4 mm (¼ inch) the change may be vertical as shown in Figure 2. b. If the change in floor level is less than or equal to 13 mm (½ inch) the change may have a slope not steeper than 1:2 as shown in Figure 3.	1. There is a change in level integral to the ICT. Procedure 1. Check that the change in level is ramped with a slope less than1:48. Result If check 1 is true then this recommendation is followed. b) Type of assessment Inspection and measurement Pre-conditions 1. There is a change in level integral to the ICT. 2. The change in level is less than or equal to 6,4 mm. Procedure 1. Check that the step is vertical or ramped. Result If check 1 is true then this recommendation is followed. c) Type of assessment Inspection and measurement Pre-conditions 1. There is a change in level integral to the ICT. 2. The change in level is less than or equal to 13 mm. Procedure 1. Check that the ramp has a slope less than 1:2. Result If check 1 is true then this recommendation is followed.
8.3.2.2 Clear floor or ground space	**C.8.3.2.2 Clear floor or ground space**

EN 301 549 clause	Determination of compliance
Where the operating area is integral to the ICT, it should provide a clear floor area that has the minimum dimensions of 760 mm (30 inches) by 1 220 mm (48 inches) from which to operate the ICT. This is shown in Figure 4.	Type of assessment Inspection and measurement Pre-conditions 1. The operating area is integral to the ICT. Procedure 1. Check that the operating area is a rectangle with minimum dimension on one edge of 760 mm. 2. Check that the operating area is a rectangle with the minimum dimension on the other edge of 1 220 mm. Result If check 1 is true then this recommendation is followed.
8.3.2.3 Approach	---
8.3.2.3.1 General Where the access space is integral to the ICT, at least one full side of the space should be unobstructed.	**C.8.3.2.3.1 General** Type of assessment Inspection Pre-conditions 1. Access space is integral to the ICT. Procedure 1. Check that one full side of the space is unobstructed. Result If check 1 is true then this recommendation is followed.
8.3.2.3.2 Forward approach Where the operating area is inside an alcove integral to the ICT, the alcove is deeper than 610 mm (24 inches), and where a forward approach is necessary, the dimension of the access space should be a minimum of 915 mm (36 inches) wide. This is shown in Figure 5.	**C.8.3.2.3.2 Forward approach** Type of assessment Inspection and measurement Pre-conditions 1. The operating area is inside an alcove integral to the ICT.

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	2. The depth of the alcove is greater than 610 mm. 3. A forward approach is necessary. Procedure 1. Check that the width of the alcove is greater than 915 mm. Result If check 1 is true then this recommendation is followed.
8.3.2.3.3 Parallel approach Where the operating area is inside an alcove integral to the ICT, the alcove is deeper than 380 mm (15 inches), and where a parallel approach is possible, the dimension of the access space should be a minimum of 1 525 mm (60 inches) wide. This is shown in Figure 6.	**C.8.3.2.3.3 Parallel approach** Type of assessment Inspection and measurement Pre-conditions 1. The operating area is inside an alcove integral to the ICT. 2. The depth of the alcove is greater than 380 mm (15 inches). 3. A parallel approach is possible. Procedure 1. Check that the width of the access space is greater than 1 525 mm (60 inches). Result If check 1 is true then this recommendation is followed.
8.3.2.4 Knee and toe clearance width Where the space under an obstacle that is integral to the ICT is part of access space, the clearance should be at least 760 mm (30 inches) wide.	**C.8.3.2.4 Knee and toe clearance width** Type of assessment Inspection and measurement Pre-conditions 1. The space under an obstacle integral to the ICT is part of an access space. Procedure 1. Check that the width of the knee clearance is greater than 760 mm (30 inches).

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	2. Check that the width of the toe clearance is greater than 760 mm (30 inches). Result If check 1 is true then this recommendation is followed.
8.3.2.5 Toe clearance Where an obstacle is integral to the ICT, a space under the obstacle that is less than 230 mm (9 inches) above the floor is considered toe clearance and should: a. extend 635 mm (25 inches) maximum under the whole obstacle; b. provide a space at least 430 mm (17 inches) deep and 230 mm (9 inches) above the floor under the obstacle; c. extend no more than 150 mm (6 inches) beyond any obstruction at 230 mm (9 inches) above the floor. This is shown in Figure 7.	**C.8.3.2.5 Toe clearance** a) Type of assessment Inspection and measurement Pre-conditions 1. The ICT is free-standing. 2. There is a space under any obstacle integral to the ICT that is less than 230 mm (9 inches) over the floor. Procedure 1. Check that the toe clearance does not extend more than 635 mm (25 inches) under the obstacle. Result If check 1 is true then this recommendation is followed. b) Type of assessment Inspection and measurement Pre-conditions 1. The ICT is free-standing. 2. There is a space under any obstacle integral to the ICT that is less than 230 mm over the floor. Procedure 1. Check that the toe clearance extends more than 430 mm (17 inches) under the whole obstacle.

EN 301 549 clause	Determination of compliance
	Result If check 1 is true then this recommendation is followed. c) Type of assessment Inspection and measurement Pre-conditions 1. The ICT is free-standing. 2. There is an obstacle integral to the ICT at less than 230 mm (9 inches) over the floor. Procedure 1. Check that the toe clearance extends less than 150 mm (6 inches) under the obstacle. Result If check 1 is true then this recommendation is followed.
8.3.2.6 Knee clearance Where an obstacle is integral to the ICT, the space under the obstacle that is between 230 mm (9 inches) and 685 mm (27 inches) above the floor is considered knee clearance and should: a. extend no more than 635 mm (25 inches) under the obstacle at a height of 230 mm (9 inches) above the floor; b. extend at least 280 mm (11 inches) under the obstacle at a height of 230 mm (9 inches) above the floor; c. extend at least 205 mm (8 inches) under the obstacle at a height of 685 mm (27 inches) above the floor; d. be permitted to be reduced in depth at a rate of 25 mm (1 inch) for each 150 mm (6 inches) in height. This is shown in Figure 8.	**C.8.3.2.6 Knee clearance** a) Type of assessment Inspection and measurement Pre-conditions 1. There is an obstacle that is integral to the ICT. 2. The obstacle is between 230 mm (9 inches) and 685 mm (27 inches) above the floor. Procedure 1. Check that there is a clearance less than 635 mm (25 inches) at a height of 230 mm (9 inches). Result If check 1 is true then this recommendation is followed.

EN 301 549 clause	Determination of compliance
	b) Type of assessment Inspection and measurement Pre-conditions 1. There is an obstacle that is integral to the ICT. 2. The obstacle is between 230 mm (9 inches) and 685 mm (27 inches) above the floor. Procedure 1. Check that there is a clearance more than 280 mm at a height of 230 mm (9 inches). Result If check 1 is true then this recommendation is followed. c) Type of assessment Inspection and measurement Pre-conditions 1. There is an obstacle that is integral to the ICT. 2. The obstacle is between 230 mm (9 inches) and 685 mm (27 inches) above the floor. Procedure 1. Check that there is a clearance more than 205 mm (8 inches) at a height of 685 mm (27 inches) Result If check 1 is true then this recommendation is followed. d) Type of assessment Inspection and measurement

EN 301 549 clause	Determination of compliance
	Pre-conditions 1. There is an obstacle that is integral to the ICT. 2. The obstacle is between 230 mm (9 inches) and 685 mm (27 inches) above the floor. Procedure 1. Check that the reduction in depth of the clearance is no greater than 25 mm (1 inches) for each 150 mm (6 inches) in height. Result If check 1 is true then this recommendation is followed.
8.3.3 Reach range for ICT	---
8.3.3.1 Forward reach	---
8.3.3.1.1 Unobstructed high forward reach Where the access space is integral to the ICT and the forward reach is unobstructed, the essential controls should be located no higher than 1 220 mm (48 inches) above the floor of the access space. This is shown in Figure 9.	**C.8.3.3.1.1 Unobstructed high forward reach** Type of assessment Inspection and measurement Pre-conditions 1. The access space is integral to the ICT. 2. There is an unobstructed access to the controls. Procedure 1. Check that the height of the topmost essential control is no higher than 1 220 mm (48 inches) above the floor contact of the ICT. Result If check 1 is true then this recommendation is followed.
8.3.3.1.2 Unobstructed low forward reach Where the access space is integral to the ICT and the forward reach is unobstructed, the essential controls should be located no lower than 380 mm (15 inches) above the floor of the access space. This is shown in Figure 9.	**C.8.3.3.1.2 Unobstructed low forward reach** Type of assessment Inspection and measurement Pre-conditions

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	1. The access space is integral to the ICT. 2. There is an unobstructed access to the controls. Procedure 1. Check that the height of the lowest essential control is no lower than 380 mm (15 inches) above the floor contact of the ICT. Result If check 1 is true then this recommendation is followed.
8.3.3.1.3 Obstructed reach	---
8.3.3.1.3.1 Clear floor space Where the access space is integral to the ICT and has an obstruction which is integral to the ICT which hinders the access to any essential controls, the ICT should provide a clear floor space which extends beneath the obstructing element for a distance not less than the required reach depth over the obstruction.	**C.8.3.3.1.3.1 Clear floor space** Type of assessment Inspection and measurement Pre-conditions 1. The access space is integral to the ICT. 2. There is an integral obstructed access to the controls. Procedure 1. Check that there is clear floor space greater than the required reach depth over the obstruction. Result If check 1 is true then this recommendation is followed.
8.3.3.1.3.2 Obstructed (< 510 mm) forward reach Where the access space is integral to the ICT and has an obstruction which is integral to the ICT and which is less than 510 mm (20 inches), the forward reach to all essential controls should be no higher than 1 220 mm (48 inches) above the floor contact of the ICT. This is shown in Figure 10 (a).	**C.8.3.3.1.3.2 Obstructed (< 510 mm) forward reach** Type of assessment Inspection and measurement Pre-conditions 1. The access space is integral to the ICT. 2. There is an integral obstructed access to the controls. 3. The obstruction is less than 510 mm (20 inches)

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	Procedure 1. Check that the height of the topmost essential control is no higher than 1 220 mm (48 inches) above the floor contact of the ICT. Result If check 1 is true then this recommendation is followed.
8.3.3.1.3.3 Obstructed (< 635 mm) forward reach Where the access space is integral to the ICT and has an obstruction which is integral to the ICT and which is greater than 510 mm (20 inches) and less than 635 mm (25 inches) maximum, the forward reach to all essential controls should be no higher than 1 120 mm (44 inches) above the floor contact of the ICT. This is shown in Figure 10 (b).	**C.8.3.3.1.3.3 Obstructed (< 635 mm) forward reach** Type of assessment Inspection and measurement Pre-conditions 1. The access space is integral to the ICT. 2. There is an integral obstructed access to the controls. 3. The obstruction is between 510 (20 inches) mm and 635 mm (25 inches). Procedure 1. Check that the height of the topmost essential control is no higher than 1 120 mm (44 inches) above the floor contact of the ICT. Result If check 1 is true then this recommendation is followed.
8.3.3.2 Side reach	---
8.3.3.2.1 Unobstructed high side reach Where the access space is integral to the ICT, allows a parallel approach, and the side reach is unobstructed or obstructed by an element integral to the ICT which is less than 255 mm (10 inches), all essential controls should be within a high side reach which is less than or equal to 1 220 mm (48 inches) above the floor of the access space. This is shown in Figure 11.	**C.8.3.3.2.1 Unobstructed high side reach** Type of assessment Inspection and measurement Pre-conditions 1. The access space is integral to the ICT. 2. A parallel approach to the ICT is possible. 3. The side reach is unobstructed or obstructed by a part less than 255 mm (10 inches) wide.

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	Procedure 1. Check that the height of the topmost essential control is less than or equal to 1 220 mm (48 inches) above the floor contact of the ICT. Result If check 1 is true then this recommendation is followed.
8.3.3.2.2 Unobstructed low side reach Where the access space is integral to the ICT, allows a parallel approach, and the side reach is unobstructed or obstructed by an element integral to the ICT which is less than 255 mm (10 inches), all essential controls should be within a low side reach which is greater than or equal to 380 mm (15 inches) above the floor of the access space. This is shown in Figure 11.	**C.8.3.3.2.2 Unobstructed low side reach** Type of assessment Inspection and measurement Pre-conditions 1. The access space is integral to the ICT. 2. A parallel approach to the ICT is possible. 3. The side reach is unobstructed or obstructed by a part less than 255 mm (10 inches) wide. Procedure 1. Check that the height of the lowest essential control is greater than or equal to 380 mm (15 inches) above the floor contact of the ICT. Result If check 1 is true then this recommendation is followed.
8.3.3.2.3 Obstructed side reach	---
8.3.3.2.3.1 Obstructed (≤ 255 mm) side reach Where the access space is integral to the ICT, allows a parallel approach and has an obstruction which is integral to the ICT, the height of the obstruction should be less than 865 mm (34 inches). Where the depth of the obstruction is less than or equal to 255 mm (10 inches), the high side reach to all essential controls should be no higher than 1 220 mm (48 inches) above the floor of the access space. This is shown in Figure 12 (a).	**C.8.3.3.2.3.1 Obstructed (≤ 255 mm) side reach** Type of assessment Inspection and measurement Pre-conditions 1. The access space is integral to the ICT. 2. A parallel approach to the ICT is possible. 3. There is an obstacle integral to the ICT with a height less than 865 mm (34 inches).

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	4. The side reach is obstructed by a part less than 255 mm (10 inches) wide. Procedure 1. Check that the height of the topmost essential control no higher than 1 220 mm (48 inches) above the floor contact of the ICT. Result If check 1 is true then this recommendation is followed.
8.3.3.2.3.2 Obstructed (≤ 610 mm) side reach Where the access space is integral to the ICT, allows a parallel approach and has an obstruction which is integral to the ICT, the height of the obstruction should be less than 865 mm (34 inches). Where the depth of the obstruction is greater than 255 mm (10 inches) with a maximum depth of 610 mm (24 inches), the high side reach to all essential controls should be no higher than 1 170 mm (46 inches) above the floor of the access space. This is shown in Figure 12 (b).	**C.8.3.3.2.3.2 Obstructed (≤ 610 mm) side reach** Type of assessment Inspection and measurement Pre-conditions 1. The access space is integral to the ICT. 2. A parallel approach to the ICT is possible. 3. There is an obstacle integral to the ICT with a height less than 865 mm (34 inches). 4. The side reach is obstructed by a part more than 255 mm (10 inches) and less than 610 mm (24 inches) wide. Procedure 1. Check that the height of the topmost essential control is no higher than 1 170 mm (46 inches) above the floor contact of the ICT. Result If check 1 is true then this recommendation is followed.
8.3.4 Visibility Where the operating area is integral to the ICT, and a display screen is provided, information on the screen should be legible from a point located 1 015 mm (40 inches) above the centre of the floor of the operating area (as defined in clause 8.3.2.2).	**C.8.3.4 Visibility** Type of assessment Inspection and measurement Pre-conditions 1. The operating area is integral to the ICT.

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NOTE: The intent of this provision is that the information on the screen can be read by users with normal vision and appropriate language skills, when seated in a wheelchair.	2. A display screen is provided. Procedure 1. Check that the screen is readable from a point located 1 015 mm (40 inches) above the centre of the clear floor space. Result If check 1 is true then this recommendation is followed.
8.3.5 Installation instructions Where an ICT is intended to be installed, instructions should be made available which outline a method to install the ICT in a manner that ensures that the dimensions of the integral spaces of the ICT conform to clauses 8.3.2 to 8.3.4.	**C.8.3.5 Installation instructions** Type of assessment Inspection and measurement Pre-conditions 1. The ICT is intended to be installed. Procedure 1. Check that instructions are made available which outline a method to install the ICT in a manner that ensures that the dimensions of the integral spaces of the ICT conform to clauses 8.3.2 to 8.3.4. Result If check 1 is true then this recommendation is followed.
8.4 Mechanically operable parts	---
8.4.1 Numeric keys Where provided, physical numeric keys arranged in a rectangular keypad layout shall have the number five key 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.	**C.8.4.1 Numeric keys** Type of assessment Inspection Pre-conditions 1. 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.

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	Result Pass: Check 1 is true Fail: Check 1 is false
8.4.2 Operation of mechanical parts	---
8.4.2.1 Means of operation of mechanical parts Where a control requires grasping, pinching, or twisting of the wrist to operate it, an accessible alternative means of operation that does not require these actions shall be provided.	**C.8.4.2.1 Means of operation of mechanical parts** Type of assessment Inspection Pre-conditions 1. 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
8.4.2.2 Force of operation of mechanical parts Where a control 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.	**C.8.4.2.2 Force of operation of mechanical parts** Type of assessment Inspection and measurement Pre-conditions 1. 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

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	Fail: Check 1 is false
8.4.3 Keys, tickets and fare cards Where ICT provides keys, tickets or fare cards, and their orientation is important for further use, they shall have an orientation that is tactilely discernible. NOTE: ETSI ETS 300 767 [i.6] defines suitable tactile indications for plastic cards.	**C.8.4.3 Keys, tickets and fare cards** Type of assessment Inspection and measurement Pre-conditions 1. 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
8.5 Tactile indication of speech mode Where ICT 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.	**C.8.5 Tactile indication of speech mode** Type of assessment Inspection and measurement Pre-conditions 1. The ICT is designed for shared use. 2. 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
9 Web	---

EN 301 549 clause	Determination of compliance
9.0 General (informative) Requirements in clause 9 apply to web pages (as defined in clause 3.1) including: • Conformance with 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, 9.2.1.4, 9.2.1.1, 9.2.1.2, 9.2.2, 9.2.3, 9.2.4, 9.3, 9.4.1.1, 9.4.1.2 and the conformance requirements of clause 9.5 of the present document. • Conformance with WCAG 2.1 Level AA is equivalent to conforming with all of clauses 9.1 to 9.4 and the conformance requirements of clause 9.5 of the present document. • Requirements for other documents and software are provided in clauses 10 and 11 respectively. NOTE 1: When evaluating web sites they are evaluated as individual web pages. Web applications, mobile web applications etc. are covered under the definition of web page which is quite broad and covers all web content types. The web content requirements in clauses 9.1 to 9.4 set out all of the Level A and Level AA Success Criteria from the W3C Web Content Accessibility Guidelines (WCAG 2.1) [5]: • Web Pages conforming to WCAG 2.0 Level A and AA also conform to clauses 9.1.1.1 to 9.1.3.3, 9.1.4.1 to 9.1.4.5, 9.2.1.1, 9.2.1.2, 9.2.2.1 to 9.2.4.7, 9.3.1.1 to 9.4.1.2 and the conformance requirements of clause 9.5. • Web Pages that conform to WCAG 2.1 Level AA conform to all of clauses 9.1 to 9.4 and the conformance requirements of clause 9.5. • Web Pages conforming to clauses 9.1.1.1 to 9.1.3.3, 9.1.4.1 to 9.1.4.5, 9.2.1.1, 9.2.1.2, 9.2.2.1 to 9.2.4.7, 9.3.1.1 to 9.4.1.2, and the conformance requirements of clause 9.5, also conform to WCAG 2.0 Level AA. • Web Pages that conform to all of clauses 9.1 to 9.4, and the conformance requirements of clause 9.5, conform to WCAG 2.1 Level AA.	**C.9.0 General (informative)** Clause 9.0 is informative only and contains no requirements requiring test.

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NOTE 2: WCAG 2.0 is identical to ISO/IEC 40500 (2012): "Information technology - W3C Web Content Accessibility Guidelines (WCAG) 2.0" [4]. The requirements in clauses 9.1 to 9.4 are written using the concept of satisfying success criteria (defined in clause 3.1). 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. NOTE 3: 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 conform to clause 9.1.2.2. In addition to Level AA success criteria, the Web Content Accessibility Guidelines also include success criteria for Level AAA. NOTE 4: The body of the present document does not include the Level AAA success criteria, both to avoid confusion with the Level A and Level AA based requirements and for harmonisation with other procurement standards. Web authors and procurement accessibility specialists are encouraged to improve accessibility beyond the requirements of the present document and should therefore 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".	
9.1 Perceivable	---
9.1.1 Text alternatives	---
9.1.1.1 Non-text content Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.1.1 Non-text content. **WCAG 2.1 Success Criterion 1.1.1 Non-text content**	**C.9.1.1.1 Non-text content** Type of assessment Inspection Pre-conditions

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Understanding Non-text Content How to Meet Non-text Content (Level A) All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below. • Controls, Input: If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Success Criterion 4.1.2 for additional requirements for controls and content that accepts user input.) • Time-Based Media: If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to Guideline 1.2 for additional requirements for media.) • Test: If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content. • Sensory: If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content. • CAPTCHA: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities. • Decoration, Formatting, Invisible: If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.	1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.1.1 Non-text content. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.2 Time-based media	---
9.1.2.1 Audio-only and video-only (prerecorded) Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded).	**C.9.1.2.1 Audio-only and video-only (prerecorded)** Type of assessment Inspection

EN 301 549 clause	Determination of compliance
WCAG 2.1 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded) Understanding Audio-only and Video-only (Prerecorded) How to Meet Audio-only and Video-only (Prerecorded) (Level A) For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such: • Prerecorded Audio-only: An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content. • Prerecorded Video-only: Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.	Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
9.1.2.2 Captions (prerecorded) Where ICT is a web page, it shall satisfy the WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded). **WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded)** Understanding Captions (Prerecorded) How to Meet Captions (Prerecorded) (Level A) Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such.	**C.9.1.2.2 Captions (prerecorded)** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
9.1.2.3 Audio description or media alternative (prerecorded) Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded).	**C.9.1.2.3 Audio description or media alternative (prerecorded)** Type of assessment Inspection

EN 301 549 clause	Determination of compliance
WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded) Understanding Audio Description or Media Alternative (Prerecorded) How to Meet Audio Description or Media Alternative (Prerecorded) (Level A) An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such.	Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
9.1.2.4 Captions (live) Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.2.4 Captions (Live). **WCAG 2.1 Success Criterion 1.2.4 Captions (Live)** Understanding Captions (Live) How to Meet Captions (Live) (Level AA) Captions are provided for all live audio content in synchronized media.	**C.9.1.2.4 Captions (live)** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.2.4 Captions (Live). Result Pass: Check 1 is true Fail: Check 1 is false
9.1.2.5 Audio description (prerecorded) Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded). **WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded).** Understanding Audio Description (Prerecorded) How to Meet Audio Description (Prerecorded) (Level AA)	**C.9.1.2.5 Audio description (prerecorded)** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded).

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Audio description is provided for all prerecorded video content in synchronized media.	Result Pass: Check 1 is true Fail: Check 1 is false
9.1.3 Adaptable	---
9.1.3.1 Info and relationships Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.3.1 Info and Relationships. **WCAG 2.1 Success Criterion 1.3.1 Info and Relationships** Understanding Info and Relationships How to Meet Info and Relationships (Level A) Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.	**C.9.1.3.1 Info and relationships** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.3.1 Info and Relationships. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.3.2 Meaningful sequence Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence. **WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence** Understanding Meaningful Sequence How to Meet Meaningful Sequence (Level A) When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.	**C.9.1.3.2 Meaningful sequence** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence. Result Pass: Check 1 is true Fail: Check 1 is false

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9.1.3.3 Sensory characteristics Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics. **WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics** Understanding Sensory Characteristics How to Meet Sensory Characteristics (Level A) Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, color, size, visual location, orientation, or sound. Note: For requirements related to color, refer to Guideline 1.4.	**C.9.1.3.3 Sensory characteristics** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.3.4 Orientation Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.3.4 Orientation. **WCAG 2.1 Success Criterion 1.3.4 Orientation** Understanding Orientation How to Meet Orientation (Level AA) Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential. Note: Examples where a particular display orientation may be essential are a bank check, a piano application, slides for a projector or television, or virtual reality content where binary display orientation is not applicable.	**C.9.1.3.4 Orientation** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.3.4 Orientation. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.3.5 Identify input purpose Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose. **WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose**	**C.9.1.3.5 Identify input purpose** Type of assessment Inspection Pre-conditions

EN 301 549 clause	Determination of compliance
Understanding Identify Input Purpose How to Meet Identify Input Purpose (Level AA) The purpose of each input field collecting information about the user can be programmatically determined when: • The input field serves a purpose identified in the Input Purposes for User Interface Components section; and • The content is implemented using technologies with support for identifying the expected meaning for form input data.	1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.4 Distinguishable	---
9.1.4.1 Use of colour Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.1 Use of Color. **WCAG 2.1 Success Criterion 1.4.1 Use of Color** Understanding Use of Color How to Meet Use of Color (Level A) Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Note: This success criterion addresses color perception specifically. Other forms of perception are covered in Guideline 1.3 including programmatic access to color and other visual presentation coding.	**C.9.1.4.1 Use of colour** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.1 Use of Color. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.4.2 Audio control Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.2 Audio Control. **WCAG 2.1 Success Criterion 1.4.2 Audio Control** Understanding Audio Control How to Meet Audio Control	**C.9.1.4.2 Audio control** Type of assessment Inspection Pre-conditions 1. The ICT is a web page.

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(Level A) If any audio on a Web page 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: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether or not it is used to meet other success criteria) must meet this success criterion. See Conformance Requirement 5: Non-Interference.	Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.2 Audio Control. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.4.3 Contrast (minimum) Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum). **WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum)** Understanding Contrast (Minimum) How to Meet Contrast (Minimum) (Level AA) The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following: • Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1; • Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. • Logotypes: Text that is part of a logo or brand name has no contrast requirement.	**C.9.1.4.3 Contrast (minimum)** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum). Result Pass: Check 1 is true Fail: Check 1 is false
9.1.4.4 Resize text Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.4 Resize text. **WCAG 2.1 Success Criterion 1.4.4 Resize text**	**C.9.1.4.4 Resize text** Type of assessment Inspection Pre-conditions

EN 301 549 clause	Determination of compliance
Understanding Resize text How to Meet Resize text (Level AA) Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality.	1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.4 Resize text. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.4.5 Images of text Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.5 Images of Text. **WCAG 2.1 Success Criterion 1.4.5 Images of Text.** Understanding Images of Text How to Meet Images of Text (Level AA) If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following: • Customizable: The image of text can be visually customized to the user's requirements; • Essential: A particular presentation of text is essential to the information being conveyed. Note: Logotypes (text that is part of a logo or brand name) are considered essential.	**C.9.1.4.5 Images of text** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.5 Images of Text. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.4.10 Reflow Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.10 Reflow. **WCAG 2.1 Success Criterion 1.4.10 Reflow** Understanding Reflow	**C.9.1.4.10 Reflow** Type of assessment Inspection Pre-conditions 1. The ICT is a web page.

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How to Meet Reflow (Level AA) 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: 320 CSS pixels is equivalent to a starting viewport width of 1280 CSS pixels wide at 400% zoom. For web content which are designed to scroll horizontally (e.g. with vertical text), the 256 CSS pixels is equivalent to a starting viewport height of 1024px at 400% zoom. Note: 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.	Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.10 Reflow. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.4.11 Non-text contrast Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast. **WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast** Understanding Non-text Contrast How to Meet Non-text Contrast (Level AA) The visual presentation of the following have a contrast ratio of at least 3:1 against adjacent color(s): • User Interface Components: Visual information required to identify user interface components and states, except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author;	**C.9.1.4.11 Non-text contrast** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast. Result Pass: Check 1 is true Fail: Check 1 is false

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• Graphical Objects: Parts of graphics required to understand the content, except when a particular presentation of graphics is essential to the information being conveyed.	
9.1.4.12 Text spacing Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.12 Text spacing. **WCAG 2.1 Success Criterion 1.4.12 Text spacing** Understanding Text Spacing How to Meet Text Spacing (Level AA) In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all of the following and by changing no other style property: • Line height (line spacing) to at least 1.5 times the font size; • Spacing following paragraphs to at least 2 times the font size; • Letter spacing (tracking) to at least 0.12 times the font size; • Word spacing to at least 0.16 times the font size. Exception: Human languages and scripts that do not make use of one or more of these text style properties in written text can conform using only the properties that exist for that combination of language and script.	**C.9.1.4.12 Text spacing** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.12 Text spacing. Result Pass: Check 1 is true Fail: Check 1 is false
9.1.4.13 Content on hover or focus Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 1.4.13 Content on Hover or Focus. **WCAG 2.1 Success Criterion 1.4.13 Content on Hover or Focus** Understanding Content on Hover or Focus How to Meet Content on Hover or Focus (Level AA)	**C.9.1.4.13 Content on hover or focus** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 1.4.13 Content on Hover or Focus.

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Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true: • Dismissable: A mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the additional content communicates an input error or does not obscure or replace other content; • Hoverable: If pointer hover can trigger the additional content, then the pointer can be moved over the additional content without the additional content disappearing; • Persistent: The additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid. Exception: The visual presentation of the additional content is controlled by the user agent and is not modified by the author. Note: Examples of additional content controlled by the user agent include browser tooltips created through use of the HTML title attribute. Note: Custom tooltips, sub-menus, and other non-modal popups that display on hover and focus are examples of additional content covered by this criterion.	Result Pass: Check 1 is true Fail: Check 1 is false
9.2 Operable	---
9.2.1 Keyboard accessible	---
9.2.1.1 Keyboard Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.1.1 Keyboard. **WCAG 2.1 Success Criterion 2.1.1 Keyboard** Understanding Keyboard How to Meet Keyboard (Level A) All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the	**C.9.2.1.1 Keyboard** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.1.1 Keyboard. Result

EN 301 549 clause	Determination of compliance
underlying function requires input that depends on the path of the user's movement and not just the endpoints. Note: This exception relates to the underlying function, not the input technique. For example, if using handwriting to enter text, the input technique (handwriting) requires path-dependent input but the underlying function (text input) does not. Note: This does not forbid and should not discourage providing mouse input or other input methods in addition to keyboard operation.	Pass: Check 1 is true Fail: Check 1 is false
9.2.1.2 No keyboard trap Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.1.2 No Keyboard Trap. **WCAG 2.1 Success Criterion 2.1.2 No Keyboard Trap** Understanding No Keyboard Trap How to Meet No Keyboard Trap (Level A) If keyboard focus can be moved to a component of the page 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: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.	**C.9.2.1.2 No keyboard trap** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.1.2 No Keyboard Trap. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.1.4 Character key shortcuts Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.1.4 Character Key Shortcuts. **WCAG 2.1 Success Criterion 2.1.4 Character Key Shortcuts** Understanding Character Key Shortcuts How to Meet Character Key Shortcuts	**C.9.2.1.4 Character key shortcuts** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure

EN 301 549 clause	Determination of compliance
(Level A) If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true: • Turn off: A mechanism is available to turn the shortcut off; • Remap: A mechanism is available to remap the shortcut to use one or more non-printable keyboard characters (e.g. Ctrl, Alt, etc.); • Active only on focus: The keyboard shortcut for a user interface component is only active when that component has focus.	1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.1.4 Character Key Shortcuts. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.2 Enough time	---
9.2.2.1 Timing adjustable Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.2.1 Timing Adjustable. **WCAG 2.1 Success Criterion 2.2.1 Timing Adjustable** Understanding Timing Adjustable How to Meet Timing Adjustable (Level A) For each time limit that is set by the content, 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	**C.9.2.2.1 Timing adjustable** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.2.1 Timing Adjustable. Result Pass: Check 1 is true Fail: Check 1 is false

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• 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: 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 Success Criterion 3.2.1, which puts limits on changes of content or context as a result of user action.	
9.2.2.2 Pause, stop, hide Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.2.2 Pause, Stop, Hide. **WCAG 2.1 Success Criterion 2.2.2 Pause, Stop, Hide** Understanding Pause, Stop, Hide How to Meet Pause, Stop, Hide (Level A) 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: For requirements related to flickering or flashing content, refer to Guideline 2.3.	**C.9.2.2.2 Pause, stop, hide** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.2.2 Pause, Stop, Hide. Result Pass: Check 1 is true Fail: Check 1 is false

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Note: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference. Note: 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: 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.	
9.2.3 Seizures and physical reactions	---
9.2.3.1 Three flashes or below threshold Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.3.1 Three Flashes or Below Threshold. **WCAG 2.1 Success Criterion 2.3.1 Three Flashes or Below Threshold** Understanding Three Flashes or Below Threshold How to Meet Three Flashes or Below Threshold (Level A) Web pages 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: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.	**C.9.2.3.1 Three flashes or below threshold** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.3.1 Three Flashes or Below Threshold. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.4 Navigable	---
9.2.4.1 Bypass blocks	**C.9.2.4.1 Bypass blocks** Type of assessment

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Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.4.1 Bypass Blocks. **WCAG 2.1 Success Criterion 2.4.1 Bypass Blocks** Understanding Bypass Blocks How to Meet Bypass Blocks (Level A) A mechanism is available to bypass blocks of content that are repeated on multiple Web pages.	Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.4.1 Bypass Blocks. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.4.2 Page titled Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.4.2 Page Titled. **WCAG 2.1 Success Criterion 2.4.2 Page Titled** Understanding Page Titled How to Meet Page Titled (Level A) Web pages have titles that describe topic or purpose.	**C.9.2.4.2 Page titled** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.4.2 Page Titled. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.4.3 Focus Order Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.4.3 Focus Order. **WCAG 2.1 Success Criterion 2.4.3 Focus Order** Understanding Focus Order How to Meet Focus Order (Level A)	**C.9.2.4.3 Focus Order** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure

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If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.	1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.4.3 Focus Order. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.4.4 Link purpose (in context) Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context)- **WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context)** Understanding Link Purpose (In Context) How to Meet Link Purpose (In Context) (Level A) The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general.	**C.9.2.4.4 Link purpose (in context)** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context). Result Pass: Check 1 is true Fail: Check 1 is false
9.2.4.5 Multiple ways Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.4.5 Multiple Ways. **WCAG 2.1 Success Criterion 2.4.5 Multiple Ways** Understanding Multiple Ways How to Meet Multiple Ways (Level AA) More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process.	**C.9.2.4.5 Multiple ways** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.4.5 Multiple Ways. Result Pass: Check 1 is true Fail: Check 1 is false

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9.2.4.6 Headings and labels Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.4.6 Headings and Labels. **WCAG 2.1 Success Criterion 2.4.6 Headings and Labels** Understanding Headings and Labels How to Meet Headings and Labels (Level AA) Headings and labels describe topic or purpose.	**C.9.2.4.6 Headings and labels** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.4.6 Headings and Labels. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.4.7 Focus visible Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.4.7 Focus Visible. **WCAG 2.1 Success Criterion 2.4.7 Focus Visible** Understanding Focus Visible How to Meet Focus Visible (Level AA) Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.	**C.9.2.4.7 Focus visible** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.4.7 Focus Visible. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.5 Input modalities	---
9.2.5.1 Pointer gestures Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.5.1 Pointer Gestures.	**C.9.2.5.1 Pointer gestures** Type of assessment Inspection

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WCAG 2.1 Success Criterion 2.5.1 Pointer Gestures Understanding Pointer Gestures How to Meet Pointer Gestures (Level A) 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: This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology).	Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.5.1 Pointer Gestures. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.5.2 Pointer cancellation Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.5.2 Pointer Cancellation. **WCAG 2.1 Success Criterion 2.5.2 Pointer Cancellation** Understanding Pointer Cancellation How to Meet Pointer Cancellation (Level A) 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: Functions that emulate a keyboard or numeric keypad key press are considered essential.	**C.9.2.5.2 Pointer cancellation** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.5.2 Pointer Cancellation. Result Pass: Check 1 is true Fail: Check 1 is false

EN 301 549 clause	Determination of compliance
Note: This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology).	
9.2.5.3 Label in name Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.5.3 Label in Name. **WCAG 2.1 Success Criterion 2.5.3 Label in Name** Understanding Label in Name How to Meet Label in Name (Level A) For user interface components with labels that include text or images of text, the name contains the text that is presented visually. Note: A best practice is to have the text of the label at the start of the name.	**C.9.2.5.3 Label in name** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.5.3 Label in Name. Result Pass: Check 1 is true Fail: Check 1 is false
9.2.5.4 Motion actuation Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 2.5.4 Motion Actuation. **WCAG 2.1 Success Criterion 2.5.4 Motion Actuation** Understanding Motion Actuation How to Meet Motion Actuation (Level A) Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when: • Supported Interface: The motion is used to operate functionality through an accessibility supported interface; • Essential: The motion is essential for the function and doing so would invalidate the activity.	**C.9.2.5.4 Motion actuation** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 2.5.4 Motion Actuation. Result Pass: Check 1 is true Fail: Check 1 is false

EN 301 549 clause	Determination of compliance
9.3 Understandable	---
9.3.1 Readable	---
9.3.1.1 Language of page Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.1.1 Language of Page. **WCAG 2.1 Success Criterion 3.1.1 Language of Page** Understanding Language of Page How to Meet Language of Page (Level A) The default human language of each Web page can be programmatically determined.	**C.9.3.1.1 Language of page** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.1.1 Language of Page. Result Pass: Check 1 is true Fail: Check 1 is false
9.3.1.2 Language of parts Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.1.2 Language of Parts. **WCAG 2.1 Success Criterion 3.1.2 Language of Parts** Understanding Language of Parts How to Meet Language of Parts (Level AA) The human language of each passage or phrase in the content 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.	**C.9.3.1.2 Language of parts** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.1.2 Language of Parts. Result Pass: Check 1 is true Fail: Check 1 is false
9.3.2 Predictable	---
9.3.2.1 On focus	**C.9.3.2.1 On focus**

EN 301 549 clause	Determination of compliance
Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.2.1 On Focus. **WCAG 2.1 Success Criterion 3.2.1 On Focus** Understanding On Focus How to Meet On Focus (Level A) When any user interface component receives focus, it does not initiate a change of context.	Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.2.1 On Focus. Result Pass: Check 1 is true Fail: Check 1 is false
9.3.2.2 On input Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.2.2 On Input. **WCAG 2.1 Success Criterion 3.2.2 On Input** Understanding On Input How to Meet On Input (Level A) Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component.	**C.9.3.2.2 On input** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.2.2 On Input. Result Pass: Check 1 is true Fail: Check 1 is false
9.3.2.3 Consistent navigation Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.2.3 Consistent Navigation. **WCAG 2.1 Success Criterion 3.2.3 Consistent Navigation** Understanding Consistent Navigation How to Meet Consistent Navigation	**C.9.3.2.3 Consistent navigation** Type of assessment Inspection Pre-conditions 1. The ICT is a web page.

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(Level AA) Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user.	Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.2.3 Consistent Navigation. Result Pass: Check 1 is true Fail: Check 1 is false
9.3.2.4 Consistent identification Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.2.4 Consistent Identification. **WCAG 2.1 Success Criterion 3.2.4 Consistent Identification** Understanding Consistent Identification How to Meet Consistent Identification (Level AA) Components that have the same functionality within a set of Web pages are identified consistently.	**C.9.3.2.4 Consistent identification** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.2.4 Consistent Identification. Result Pass: Check 1 is true Fail: Check 1 is false
9.3.3 Input assistance	---
9.3.3.1 Error identification Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.3.1 Error Identification. **WCAG 2.1 Success Criterion 3.3.1 Error Identification** Understanding Error Identification How to Meet Error Identification (Level A) If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text.	**C.9.3.3.1 Error identification** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.3.1 Error Identification.

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	Result Pass: Check 1 is true Fail: Check 1 is false
9.3.3.2 Labels or instructions Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions. **WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions** Understanding Labels or Instructions How to Meet Labels or Instructions (Level A) Labels or instructions are provided when content requires user input.	**C.9.3.3.2 Labels or instructions** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions. Result Pass: Check 1 is true Fail: Check 1 is false
9.3.3.3 Error suggestion Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.3.3 Error Suggestion. **WCAG 2.1 Success Criterion 3.3.3 Error Suggestion** Understanding Error Suggestion How to Meet Error Suggestion (Level AA) If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content.	**C.9.3.3.3 Error suggestion** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.3.3 Error Suggestion. Result Pass: Check 1 is true Fail: Check 1 is false
9.3.3.4 Error prevention (legal, financial, data)	**C.9.3.3.4 Error prevention (legal, financial, data)**

EN 301 549 clause	Determination of compliance
Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data). **WCAG 2.1 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data)** Understanding Error Prevention (Legal, Financial, Data) How to Meet Error Prevention (Legal, Financial, Data) (Level AA) For Web pages 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: • Reversible: Submissions are reversible. • Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. • Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.	Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data) . Result Pass: Check 1 is true Fail: Check 1 is false
9.4 Robust	---
9.4.1 Compatible	---
9.4.1.1 Parsing Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 4.1.1 Parsing. **WCAG 2.1 Success Criterion 4.1.1 Parsing** Understanding Parsing How to Meet Parsing (Level A) In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features.	**C.9.4.1.1 Parsing** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 4.1.1 Parsing. Result Pass: Check 1 is true

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Note: Start and end tags that are missing a critical character in their formation, such as a closing angle bracket or a mismatched attribute value quotation mark are not complete.	Fail: Check 1 is false
9.4.1.2 Name, role, value Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 4.1.2 Name, Role, Value. **WCAG 2.1 Success Criterion 4.1.2 Name, Role, Value** Understanding Name, Role, Value How to Meet Name, Role, Value (Level A) 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: This success criterion is primarily for Web authors who develop or script their own user interface components. For example, standard HTML controls already meet this success criterion when used according to specification.	**C.9.4.1.2 Name, role, value** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 4.1.2 Name, Role, Value. Result Pass: Check 1 is true Fail: Check 1 is false
9.4.1.3 Status messages Where ICT is a web page, it shall satisfy WCAG 2.1 Success Criterion 4.1.3 Status Messages. **WCAG 2.1 Success Criterion 4.1.3 Status Messages** Understanding Status Messages How to Meet Status Messages (Level AA) In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus.	**C.9.4.1.3 Status messages** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page does not fail WCAG 2.1 Success Criterion 4.1.3 Status Messages. Result Pass: Check 1 is true Fail: Check 1 is false

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9.5 WCAG conformance requirements Where ICT is a web page, it shall satisfy all the following five WCAG 2.1 conformance requirements at Level AA [5]. 1. Conformance level 2. Full pages 3. Complete processes 4. Only Accessibility-Supported Ways of Using Technologies 5. Non-interference NOTE 1: 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 2.1 [5]) is provided, will meet conformance requirement 1. NOTE 2: According to W3C: "WCAG 2.1 extends Web Content Accessibility Guidelines 2.0 [4], which was published as a W3C Recommendation December 2008. Content that conforms to WCAG 2.1 also conforms to WCAG 2.0, and therefore to policies that reference WCAG 2.0" [4]. NOTE 3: Conformance requirement 5 states that 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. WCAG 2.1 conformance requirements at Level AA [5]	**C.9.5 WCAG conformance requirements** Type of assessment Inspection Pre-conditions 1. The ICT is a web page. Procedure 1. Check that the web page satisfies WCAG 2.1 [5] conformance requirement "1: Conformance level" at Level AA. 2. Check that the web page satisfies WCAG 2.1 [5] conformance requirement "2: Full pages". 3. Check that the web page satisfies WCAG 2.1 [5] conformance requirement "3: Complete processes". 4. Check that the web page satisfies WCAG 2.1 [5] conformance requirement "4: Only Accessibility-Supported Ways of Using Technologies". 5. Check that the web page satisfies WCAG 2.1 [5] conformance requirement "5: Non-interference". Result Pass: All checks are true Fail: Any check is false
10 Non-web documents	---
10.0 General (informative) Requirements in clause 10 apply to documents: - that are not web pages; - that are not embedded in web pages; - that are embedded in web pages and that are not used in the rendering and that are not intended to be rendered together with the web page in which they are embedded.	**C.10.0 General (informative)**

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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, closed caption text, etc. 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.	
10.1 Perceivable	---
10.1.1 Text alternatives	---
10.1.1.1 Non-text content Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.1.1 Non-text Content. NOTE: CAPTCHAs do not currently appear outside of the Web. However, if they do appear, this guidance is accurate. **WCAG 2.1 Success Criterion 1.1.1 Non-text Content** Understanding Non-text Content How to Meet Non-text Content (Level A) All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below.	**C.10.1.1.1 Non-text content** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.1.1 Non-text content. Result Pass: Check 1 is true

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• Controls, Input: If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Success Criterion 4.1.2 for additional requirements for controls and content that accepts user input.) • Time-Based Media: If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to Guideline 1.2 for additional requirements for media.) • Test: If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content. • Sensory: If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content. • CAPTCHA: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities. • Decoration, Formatting, Invisible: If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.	Fail: Check 1 is false
10.1.2 Time-based media	---
10.1.2.1 Audio-only and video-only (prerecorded) Where ICT is a non-web document, it shall satisfy WCAG 2.1 Success Criterion 1.2.1 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. **Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded)** Understanding Audio-only and Video-only (Prerecorded) How to Meet Audio-only and Video-only (Prerecorded)	**C.10.1.2.1 Audio-only and video-only (prerecorded)** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded).

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(Level A) For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such: • Prerecorded Audio-only: An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content. • Prerecorded Video-only: Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.	Result Pass: Check 1 is true Fail: Check 1 is false
10.1.2.2 Captions (prerecorded) Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded). NOTE: The WCAG 2.1 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 2.1, 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". **WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded).** Understanding Captions (Prerecorded) How to Meet Captions (Prerecorded) (Level A) Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such.	**C.10.1.2.2 Captions (prerecorded)** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
10.1.2.3 Audio description or media alternative (prerecorded) Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded).	**C.10.1.2.3 Audio description or media alternative (prerecorded)** Type of assessment

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NOTE 1: The WCAG 2.1 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. **WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded).** Understanding Audio Description or Media Alternative (Prerecorded) How to Meet Audio Description or Media Alternative (Prerecorded) (Level A) An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such.	Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
10.1.2.4 Captions (live) Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.2.4 Captions (Live). NOTE: The WCAG 2.1 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 2.1, 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". **WCAG 2.1 Success Criterion 1.2.4 Captions (Live)** Understanding Captions (Live) How to Meet Captions (Live) (Level AA) Captions are provided for all live audio content in synchronized media.	**C.10.1.2.4 Captions (live)** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.2.4 Captions (Live). Result Pass: Check 1 is true Fail: Check 1 is false
10.1.2.5 Audio description (prerecorded)	**C.10.1.2.5 Audio description (prerecorded)** Type of assessment

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Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded). NOTE 1: The WCAG 2.1 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. **WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded)** Understanding Audio Description (Prerecorded) How to Meet Audio Description (Prerecorded) (Level AA) Audio description is provided for all prerecorded video content in synchronized media.	Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
10.1.3 Adaptable	---
10.1.3.1 Info and relationships Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.3.1 Info and Relationships. **WCAG 2.1 Success Criterion 1.3.1 Info and Relationships** Understanding Info and Relationships How to Meet Info and Relationships (Level A) Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.	**C.10.1.3.1 Info and relationships** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.3.1 Info and Relationships. Result Pass: Check 1 is true Fail: Check 1 is false
10.1.3.2 Meaningful sequence Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence. **WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence**	**C.10.1.3.2 Meaningful sequence** Type of assessment Inspection

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Understanding Meaningful Sequence How to Meet Meaningful Sequence (Level A) When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.	Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence. Result Pass: Check 1 is true Fail: Check 1 is false
10.1.3.3 Sensory characteristics Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics. **WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics.** Understanding Sensory Characteristics How to Meet Sensory Characteristics (Level A) Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, color, size, visual location, orientation, or sound. Note: For requirements related to color, refer to WCAG 2.1 - Guideline 1.4.	**C.10.1.3.3 Sensory characteristics** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics. Result Pass: Check 1 is true Fail: Check 1 is false
10.1.3.4 Orientation Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.3.4 Orientation. **WCAG 2.1 Success Criterion 1.3.4 Orientation** Understanding Orientation How to Meet Orientation (Level AA)	**C.10.1.3.4 Orientation** Type of assessment Inspection Pre-conditions: 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.3.4 Orientation.

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Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential. Note: Examples where a particular display orientation may be essential are a bank check, a piano application, slides for a projector or television, or virtual reality content where binary display orientation is not applicable.	Result Pass: Check 1 is true Fail: Check 1 is false
10.1.3.5 Identify input purpose Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose. **WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose** Understanding Identify Input Purpose How to Meet Identify Input Purpose (Level AA) The purpose of each input field collecting information about the user can be programmatically determined when: • The input field serves a purpose identified in the Input Purposes for User Interface Components section; and • The content is implemented using technologies with support for identifying the expected meaning for form input data.	**C.10.1.3.5 Identify input purpose** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose. Result Pass: Check 1 is true Fail: Check 1 is false
10.1.4 Distinguishable	---
10.1.4.1 Use of colour Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.4.1 Use of Color. **WCAG 2.1 Success Criterion 1.4.1 Use of Color.** Understanding Use of Color How to Meet Use of Color (Level A)	**C.10.1.4.1 Use of colour** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.4.1 Use of Color.

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Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Note: This success criterion addresses color perception specifically. Other forms of perception are covered in Guideline 1.3 including programmatic access to color and other visual presentation coding.	Result Pass: Check 1 is true Fail: Check 1 is false
10.1.4.2 Audio control Where ICT is a non-web document, it 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 2.1 Success Criterion 1.4.2 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. **WCAG 2.1 Success Criterion 1.4.2 Audio Control** Understanding Audio Control How to Meet Audio Control (Level A)	**C.10.1.4.2 Audio control** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.1. Result Pass: Check 1 is true Fail: Check 1 is false
10.1.4.3 Contrast (minimum) Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum). **WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum)** Understanding Contrast (Minimum)	**C.10.1.4.3 Contrast (minimum)** Type of assessment: Inspection Pre-conditions 1. The ICT is a non-web document.

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How to Meet Contrast (Minimum) (Level AA) The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following: • Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1; • Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. • Logotypes: Text that is part of a logo or brand name has no contrast requirement.	Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum). Result Pass: Check 1 is true Fail: Check 1 is false
10.1.4.4 Resize text Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.4.4 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. **WCAG 2.1 Success Criterion 1.4.4 Resize Text** Understanding Resize text How to Meet Resize text (Level AA) Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality.	**C.10.1.4.4 Resize text** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.4.4 Resize text. Result Pass: Check 1 is true Fail: Check 1 is false

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10.1.4.5 Images of text Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 1.4.5 Images of Text. **WCAG 2.1 Success Criterion 1.4.5 Images of Text** Understanding Images of Text How to Meet Images of Text (Level AA) If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following: • Customizable: The image of text can be visually customized to the user's requirements; • Essential: A particular presentation of text is essential to the information being conveyed. Note: Logotypes (text that is part of a logo or brand name) are considered essential.	**C.10.1.4.5 Images of text** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.4.5 Images of Text. Result Pass: Check 1 is true Fail: Check 1 is false
10.1.4.10 Reflow Where ICT is a non-web document, it 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 1280 CSS pixels wide at 400% zoom. For documents which are designed to scroll	**C.10.1.4.10 Reflow** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.2. Result Pass: Check 1 is true Fail: Check 1 is false

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horizontally (e.g. with vertical text), the 256 CSS pixels is equivalent to a starting viewport height of 1024px 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 2.1 Success Criterion 1.4.10 Reflow replacing the original WCAG 2.1 notes with notes 1 and 2, above. **WCAG 2.1 Success Criterion 1.4.10 Reflow** Understanding Reflow How to Meet Reflow (Level AA)	
10.1.4.11 Non-text contrast Where ICT is a non-web document, it shall satisfy WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast. **WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast.** Understanding Non-text Contrast How to Meet Non-text Contrast (Level AA) The visual presentation of the following have a contrast ratio of at least 3:1 against adjacent color(s): • User Interface Components: Visual information required to identify user interface components and states, except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author; • Graphical Objects: Parts of graphics required to understand the content, except when a particular presentation of graphics is essential to the information being conveyed.	**C.10.1.4.11 Non-text contrast** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document 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 2.1 Success Criterion 1.4.11 Non-text Contrast. Result Pass: Check 1 is true Fail: Check 1 is false

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10.1.4.12 Text spacing Where ICT is a non-web document that does not have a fixed size content layout area that is essential to the information being conveyed, it shall satisfy WCAG 2.1 Success Criterion 1.4.12 Text spacing. **WCAG 2.1 Success Criterion 1.4.12 Text spacing** Understanding Text Spacing How to Meet Text Spacing (Level AA) In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all of the following and by changing no other style property: • Line height (line spacing) to at least 1.5 times the font size; • Spacing following paragraphs to at least 2 times the font size; • Letter spacing (tracking) to at least 0.12 times the font size; • Word spacing to at least 0.16 times the font size. Exception: Human languages and scripts that do not make use of one or more of these text style properties in written text can conform using only the properties that exist for that combination of language and script.	**C.10.1.4.12 Text spacing** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.4.12 Text spacing. Result Pass: Check 1 is true Fail: Check 1 is false
10.1.4.13 Content on hover or focus Where ICT is a non-web document, it shall satisfy WCAG 2.1 Success Criterion 1.4.13 Content on Hover or Focus. **WCAG 2.1 Success Criterion 1.4.13 Content on Hover or Focus.** Understanding Content on Hover or Focus How to Meet Content on Hover or Focus (Level AA) Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true: • Dismissable: A mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the	**C.10.1.4.13 Content on hover or focus** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 1.4.13 Content on Hover or Focus. Result Pass: Check 1 is true

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additional content communicates an input error or does not obscure or replace other content; • Hoverable: If pointer hover can trigger the additional content, then the pointer can be moved over the additional content without the additional content disappearing; • Persistent: The additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid. Exception: The visual presentation of the additional content is controlled by the user agent and is not modified by the author. Note: Examples of additional content controlled by the user agent include browser tooltips created through use of the HTML title attribute. Note: Custom tooltips, sub-menus, and other nonmodal popups that display on hover and focus are examples of additional content covered by this criterion.	Fail: Check 1 is false
10.2 Operable	---
10.2.1 Keyboard accessible	---
10.2.1.1 Keyboard Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 2.1.1 Keyboard. **WCAG 2.1 Success Criterion 2.1.1 Keyboard** Understanding Keyboard How to Meet Keyboard (Level A) All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. Note: This exception relates to the underlying function, not the input technique. For example, if using handwriting to enter text, the input technique	**C.10.2.1.1 Keyboard** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 2.1.1 Keyboard. Result Pass: Check 1 is true Fail: Check 1 is false

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(handwriting) requires path-dependent input but the underlying function (text input) does not. Note: This does not forbid and should not discourage providing mouse input or other input methods in addition to keyboard operation.	
10.2.1.2 No keyboard trap Where ICT is a non-web document, it 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 2.1 Success Criterion 2.1.2 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". **WCAG 2.1 Success Criterion 2.1.2 No Keyboard Trap** Understanding No Keyboard Trap How to Meet No Keyboard Trap (Level A)	**C.10.2.1.2 No keyboard trap** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.3. Result Pass: Check 1 is true Fail: Check 1 is false
10.2.1.4 Character key shortcuts Where ICT is a non-web document, it shall satisfy WCAG 2.1 Success Criterion 2.1.4 Character Key Shortcuts.	**C.10.2.1.4 Character key shortcuts** Type of assessment Inspection

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WCAG 2.1 Success Criterion 2.1.4 Character Key Shortcuts Understanding Character Key Shortcuts How to Meet Character Key Shortcuts (Level A) If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true: • Turn off: A mechanism is available to turn the shortcut off; • Remap: A mechanism is available to remap the shortcut to use one or more non-printable keyboard characters (e.g. Ctrl, Alt, etc.); • Active only on focus: The keyboard shortcut for a user interface component is only active when that component has focus.	Pre-conditions 1. The ICT is a non-web document. Procedure: 1. Check that the document does not fail WCAG 2.1 Success Criterion 2.1.4 Character Key Shortcuts. Result Pass: Check 1 is true Fail: Check 1 is false
10.2.2 Enough time	---
10.2.2.1 Timing adjustable Where ICT is a non-web document, it 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	**C.10.2.2.1 Timing adjustable** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.4. Result Pass: Check 1 is true Fail: Check 1 is false

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• 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 2.1 Success Criterion 3.2.1, 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 2.1 Success Criterion 2.2.1 Timing Adjustable replacing "the content" with "documents" and with the words "WCAG 2.1" added before the word "Success Criterion" in note 1 above. **WCAG 2.1 Success Criterion 2.2.1 Timing Adjustable** Understanding Timing Adjustable How to Meet Timing Adjustable (Level A)	
10.2.2.2 Pause, stop, hide Where ICT is a non-web document, it 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	**C.10.2.2.2 Pause, stop, hide** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.5. Result Pass: Check 1 is true Fail: Check 1 is false

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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 2.1 Guideline 2.3. 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 2.1 Success Criterion 2.2.2 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 2.1" added before the word "Guideline" in note 1 above and with note 2 above re-drafted to avoid the use of the word "must". **Guideline 2.3 Seizures and Physical Reactions** **Do not design content in a way that is known to cause seizures or physical reactions.** **WCAG 2.1 Success Criterion 2.2.2 Pause, Stop, Hide** Understanding Pause, Stop, Hide How to Meet Pause, Stop, Hide (Level A)	
10.2.3 Seizures and physical reactions	---

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10.2.3.1 Three flashes or below threshold Where ICT is a non-web document, it 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 2.1 Success Criterion 2.3.1 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". **WCAG 2.1 Success Criterion 2.3.1 Three Flashes or Below Threshold** Understanding Three Flashes or Below Threshold How to Meet Three Flashes or Below Threshold (Level A)	**C.10.2.3.1 Three flashes or below threshold** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.6. Result Pass: Check 1 is true Fail: Check 1 is false
10.2.4 Navigable	---
10.2.4.2 Document titled Where ICT is a non-web document, it 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.	**C.10.2.4.2 Document titled** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure

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NOTE 2: This success criterion is identical to the WCAG 2.1 Success Criterion 2.4.2 Page Titled replacing "Web pages" with "documents" and with the addition of note 1 above. **WCAG 2.1 Success Criterion 2.4.2 Page Titled** Understanding Page Titled How to Meet Page Titled (Level A)	1. Check that the document does not fail the Success Criterion in Table 10.7. Result Pass: Check 1 is true Fail: Check 1 is false
10.2.4.3 Focus Order Where ICT is a non-web document, it 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 2.1 Success Criterion 2.4.3 Focus Order replacing "Web page" with "document". **WCAG 2.1 Success Criterion 2.4.3 Focus Order** Understanding Focus Order How to Meet Focus Order (Level A)	**C.10.2.4.3 Focus Order** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.8. Result Pass: Check 1 is true Fail: Check 1 is false
10.2.4.4 Link purpose (in context) Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context). **WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context)** Understanding Link Purpose (In Context) How to Meet Link Purpose (In Context) (Level A)	**C.10.2.4.4 Link purpose (in context)** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context).

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The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general.	Result Pass: Check 1 is true Fail: Check 1 is false
10.2.4.6 Headings and labels Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 2.4.6 Headings and Labels. **WCAG 2.1 Success Criterion 2.4.6 Headings and Labels** Understanding Headings and Labels How to Meet Headings and Labels (Level AA) Headings and labels describe topic or purpose	**C.10.2.4.6 Headings and labels** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 2.4.6 Headings and Labels. Result Pass: Check 1 is true Fail: Check 1 is false
10.2.4.7 Focus visible Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 2.4.7 Focus Visible **WCAG 2.1 Success Criterion 2.4.7 Focus Visible** Understanding Focus Visible How to Meet Focus Visible (Level AA) Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.	**C.10.2.4.7 Focus visible** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 2.4.7 Focus Visible. Result Pass: Check 1 is true Fail: Check 1 is false
10.2.5 Input modalities	---

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10.2.5.1 Pointer gestures Where ICT is a non-web document, it 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 2.1 Success Criterion 2.5.1 Pointer Gestures replacing the original WCAG 2.1 note with note 1 above. **WCAG 2.1 Success Criterion 2.5.1 Pointer Gestures** Understanding Pointer Gestures How to Meet Pointer Gestures (Level A)	**C.10.2.5.1 Pointer gestures** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.9 Result Pass: Check 1 is true Fail: Check 1 is false
10.2.5.2 Pointer cancellation Where ICT is a non-web document, it 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;	**C.10.2.5.2 Pointer cancellation** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the success criterion in Table 10.10 Result Pass: Check 1 is true Fail: Check 1 is false

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• 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 2.1 Success Criterion 2.5.2 Pointer Cancellation replacing the original WCAG 2.1 note with notes 1 and 2 above. **WCAG 2.1 Success Criterion 2.5.2 Pointer Cancellation** Understanding Pointer Cancellation How to Meet Pointer Cancellation (Level A)	
10.2.5.3 Label in name Where ICT is a non-web document, it shall satisfy WCAG 2.1 Success Criterion 2.5.3 Label in Name. **WCAG 2.1 Success Criterion 2.5.3 Label in Name** Understanding Label in Name How to Meet Label in Name (Level A) For user interface components with labels that include text or images of text, the name contains the text that is presented visually. Note: A best practice is to have the text of the label at the start of the name.	**C.10.2.5.3 Label in name** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 2.5.3 Label in Name. Result Pass: Check 1 is true Fail: Check 1 is false
10.2.5.4 Motion actuation Where ICT is a non-web document, it shall satisfy WCAG 2.1 Success Criterion 2.5.4 Motion Actuation.	**C.10.2.5.4 Motion actuation** Type of assessment Inspection

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WCAG 2.1 Success Criterion 2.5.4 Motion Actuation Understanding Motion Actuation How to Meet Motion Actuation (Level A) Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when: • Supported Interface: The motion is used to operate functionality through an accessibility supported interface; • Essential: The motion is essential for the function and doing so would invalidate the activity.	Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 2.5.4 Motion Actuation. Result Pass: Check 1 is true Fail: Check 1 is false
10.3 Understandable	---
10.3.1 Readable	---
10.3.1.1 Language of page Where ICT is a non-web document, it shall satisfy the success criterion in Table 10.11. **Table 10.11: Document success criterion: Language of page** The default human language of each document can be programmatically determined. NOTE: This success criterion is identical to the WCAG 2.1 Success Criterion 3.1.1 Language of Page replacing "web page" with "document". **WCAG 2.1 Success Criterion 3.1.1 Language of Page** Understanding Language of Page How to Meet Language of Page (Level A)	**C.10.3.1.1 Language of page** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.11. Result Pass: Check 1 is true Fail: Check 1 is false
10.3.1.2 Language of parts	**C.10.3.1.2 Language of parts** Type of assessment

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Where ICT is a non-web document, it 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 2.1 Success Criterion 3.1.2 Language of Parts replacing "content" with "document" and with the addition of notes 1 and 2 above. **WCAG 2.1 Success Criterion 3.1.2 Language of Parts** Understanding Language of Parts How to Meet Language of Parts (Level AA)	Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.12. Result Pass: Check 1 is true Fail: Check 1 is false
10.3.2 Predictable	---
10.3.2.1 On focus Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 3.2.1 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 menus and toolbars of the user agent change depending upon whether the user is interacting with the presentation content, or the embedded spreadsheet	**C.10.3.2.1 On focus** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure

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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 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. **WCAG 2.1 Success Criterion 3.2.1 On Focus** Understanding On Focus How to Meet On Focus (Level A) When any user interface component receives focus, it does not initiate a change of context.	1. Check that the document does not fail WCAG 2.1 Success Criterion 3.2.1 On Focus. Result Pass: Check 1 is true Fail: Check 1 is false
10.3.2.2 On input Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 3.2.2 On Input. **WCAG 2.1 Success Criterion 3.2.2 On Input** Understanding On Input How to Meet On Input (Level A) Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component.	**C.10.3.2.2 On input** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 3.2.2 On Input. Result Pass: Check 1 is true Fail: Check 1 is false
10.3.3 Input assistance	---
10.3.3.1 Error identification Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 3.3.1 Error Identification. **WCAG 2.1 Success Criterion 3.3.1 Error Identification** Understanding Error Identification	**C.10.3.3.1 Error identification** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document.

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How to Meet Error Identification (Level A) If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text.	Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 3.3.1 Error Identification. Result Pass: Check 1 is true Fail: Check 1 is false
10.3.3.2 Labels or instructions Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions. **WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions** Understanding Labels or Instructions How to Meet Labels or Instructions (Level A) Labels or instructions are provided when content requires user input.	**C.10.3.3.2 Labels or instructions** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions. Result Pass: Check 1 is true Fail: Check 1 is false
10.3.3.3 Error suggestion Where ICT is a non-web document, it shall satisfy the WCAG 2.1 Success Criterion 3.3.3 Error Suggestion. **WCAG 2.1 Success Criterion 3.3.3 Error Suggestion** Understanding Error Suggestion How to Meet Error Suggestion (Level AA) If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content.	**C.10.3.3.3 Error suggestion** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail WCAG 2.1 Success Criterion 3.3.3 Error Suggestion [4]. Result: Pass: Check 1 is true

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	Fail: Check 1 is false
10.3.3.4 Error prevention (legal, financial, data) Where ICT is a non-web document, it 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 2.1 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data) replacing "web pages" with "documents". **WCAG 2.1 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data)** Understanding Error Prevention (Legal, Financial, Data) How to Meet Error Prevention (Legal, Financial, Data) (Level AA)	**C.10.3.3.4 Error prevention (legal, financial, data)** Type of assessment Inspection Pre-conditions 1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.13. Result Pass: Check 1 is true Fail: Check 1 is false
10.4 Robust	---
10.4.1 Compatible	---
10.4.1.1 Parsing Where ICT is a non-web document, it shall satisfy the success criterion in Table 10.14. **Table 10.14: Document success criterion: Parsing**	**C.10.4.1.1 Parsing** Type of assessment Inspection Pre-conditions

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For documents that use markup languages, in such a way that the markup is separately exposed and available to assistive technologies and accessibility features of software or to a user-selectable user agent, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features. NOTE 1: Start and end tags that are missing a critical character in their formation, such as a closing angle bracket or a mismatched attribute value quotation mark are not complete. NOTE 2: Markup is not always available to assistive technology or to user selectable user agents such as browsers. In such cases, conformance to this provision would have no impact on accessibility as it can for web content where it is exposed. NOTE 3: Examples of markup that is separately exposed and available to assistive technologies and to user agents include but are not limited to: documents encoded in HTML, ODF, and OOXML. In these examples, the markup can be parsed entirely in two ways: (a) by assistive technologies which may directly open the document, (b) by assistive technologies using DOM APIs of user agents for these document formats. NOTE 4: This success criterion is identical to the WCAG 2.1 Success Criterion 4.1.1 Parsing replacing "In content implemented using markup languages" with "For documents that use markup languages, in such a way that the markup is separately exposed and available to assistive technologies and accessibility features of software or to a user-selectable user agent" with the addition of notes 2 and 3 above. **WCAG 2.1 Success Criterion 4.1.1 Parsing** Understanding Parsing How to Meet Parsing (Level A)	1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.14. Result Pass: Check 1 is true Fail: Check 1 is false
10.4.1.2 Name, role, value Where ICT is a non-web document, it shall satisfy the success criterion in Table 10.15. **Table 10.15: Document success criterion: Name, role, value**	**C.10.4.1.2 Name, role, value** Type of assessment Inspection Pre-conditions

EN 301 549 clause	Determination of compliance
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 2.1 Success Criterion 4.1.2 Name, Role, Value replacing the original WCAG 2.1 note with note 1 and with the addition of note 2 above. **WCAG 2.1 Success Criterion 4.1.2 Name, Role, Value** Understanding Name, Role, Value How to Meet Name, Role, Value (Level A)	1. The ICT is a non-web document. Procedure 1. Check that the document does not fail the Success Criterion in Table 10.15. Result Pass: Check 1 is true Fail: Check 1 is false
10.5 Caption positioning Where ICT is a non-web document that contains synchronized media with captions, the captions should not obscure relevant information in the synchronized media.	**C.10.5 Caption positioning** Clause 10.5 contains no requirements requiring test.
10.6 Audio description timing Where ICT is a non-web document that contains synchronized media with audio description, the audio description should not interfere with relevant audio information in the synchronized media.	**C.10.6 Audio description timing** Clause 10.6 contains no requirements requiring test.
11 Software	---
11.0 General (informative) This clause provides requirements for:	**C.11.0 General (informative)** Clause 11.0 is advisory only and contains no requirements requiring test.

EN 301 549 clause	Determination of compliance
• platform software; • software that provides a user interface including content that is in the software; • authoring tools; • software that operates as assistive technology. NOTE 1: User agents are examples of software that provide a user interface. NOTE 2: The requirements for Web content, including software that is Web content, can be found in clause 9. NOTE 3: The requirements for documents, that may be presented by user agents, can be found in clause 10. NOTE 4: 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 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. NOTE 5: 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 bar of a graphical user interface application, images that appear in a toolbar, prompts spoken in an auditory user interface, other user interaction	

EN 301 549 clause	Determination of compliance
controls, and other text, graphics or material that is not loaded from outside the software.	
11.1 Perceivable	---
11.1.1 Text alternatives	---
11.1.1.1 Non-text content	---
11.1.1.1.1 Non-text content (open functionality) Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading, it shall satisfy WCAG 2.1 Success Criterion 1.1.1 Non-text Content. NOTE: CAPTCHAs do not currently appear outside of the Web. However, if they do appear, this guidance is accurate. **WCAG 2.1 Success Criterion 1.1.1 Non-text Content** Understanding Non-text Content How to Meet Non-text Content (Level A) All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below. • Controls, Input: If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Success Criterion 4.1.2 for additional requirements for controls and content that accepts user input.) • Time-Based Media: If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to Guideline 1.2 for additional requirements for media.) • Test: If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content. • Sensory: If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.	**C.11.1.1.1.1 Non-text content (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 1.1.1 Non-text Content. Result Pass: Check 1 is true Fail: Check 1 is false

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• CAPTCHA: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities. • Decoration, Formatting, Invisible: If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.	
11.1.1.1.2 Non-text content (closed functionality) Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading, it shall meet requirement 5.1.3.6 (Speech output for non-text content).	**C.11.1.1.1.2 Non-text content (closed functionality)** Type of assessment Testing Pre-conditions 1. The ICT is non-web software that provides a user interface. 2. The user interface is closed to assistive technologies for screen reading. 3. Non-text content is presented to users via speech output. 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 2.1 Success Criterion 1.1.1 Non-text Content. Result Pass: Check (1 and 2 and 3 and 4 are true) or (1 and 2 are false) or (1 and 3 are false)

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	Fail: Checks (1 true and 2 false) or (1 true and 3 false) or (1 and 2 and 3 are true and 4 is false)
11.1.2 Time-based media	---
11.1.2.1 Audio-only and video-only (prerecorded)	---
11.1.2.1.1 Audio-only and video-only (prerecorded - open functionality) Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading and where pre-recorded auditory information is not needed to enable the use of closed functions of ICT, it shall satisfy the WCAG 2.1 Success Criterion 1.2.1 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. **Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded)** Understanding Audio-only and Video-only (Prerecorded) How to Meet Audio-only and Video-only (Prerecorded) (Level A) For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such: • Prerecorded Audio-only: An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content. • Prerecorded Video-only: Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content	**C.11.1.2.1.1 Audio-only and video-only (prerecorded - open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. 2. The software provides support to assistive technologies for screen reading. 3. Pre-recorded auditory information is not needed to enable the use of closed functions of ICT. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
11.1.2.1.2 Audio-only and video-only (prerecorded - closed functionality)	---
11.1.2.1.2.1 Prerecorded audio-only (closed functionality) Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading and where pre-recorded auditory information is needed to enable the use of closed functions of ICT, the	**C.11.1.2.1.2.1 Prerecorded audio-only (closed functionality)** Type of assessment Inspection

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functionality of software that provides a user interface shall meet requirement 5.1.5 (Visual output for auditory information).	Pre-conditions 1. ICT is non-web software that provides a user interface. 2. The user interface is closed to assistive technologies for screen reading. 3. Pre-recorded auditory information is needed to enable the use of closed functions 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
11.1.2.1.2.2 Prerecorded video-only (closed functionality) Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading, it shall meet requirement 5.1.3.7 (Speech output for video information).	**C.11.1.2.1.2.2 Prerecorded video-only (closed functionality)** Type of assessment Inspection Pre-conditions 1. ICT is non-web software that provides a user interface. 2. The user interface is closed to assistive technologies for screen reading. 3. Pre-recorded video content is needed to enable the use of closed functions of ICT. 4. 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

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	Fail: Check 1 is false
11.1.2.2 Captions (prerecorded) Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded). NOTE: The WCAG 2.1 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 2.1, 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". **WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded)** Understanding Captions (Prerecorded) How to Meet Captions (Prerecorded) (Level A) Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such.	**C.11.1.2.2 Captions (prerecorded)** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 1.2.2 Captions (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
11.1.2.3 Audio description or media alternative (prerecorded)	---
11.1.2.3.1 Audio description or media alternative (prerecorded - open functionality) Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading, it shall satisfy the WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded). NOTE 1: The WCAG 2.1 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.	**C.11.1.2.3.1 Audio description or media alternative (prerecorded - open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. 2. The software provides support to assistive technologies for screen reading. Procedure

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WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded) Understanding Audio Description or Media Alternative (Prerecorded) How to Meet Audio Description or Media Alternative (Prerecorded) (Level A) An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such.	1. Check that the software does not fail WCAG 2.1 Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
11.1.2.3.2 Audio description or media alternative (prerecorded - closed functionality) Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading, it shall meet requirement 5.1.3.7 (Speech output for video information).	**C.11.1.2.3.2 Audio description or media alternative (prerecorded - closed functionality)** Type of assessment Inspection Pre-conditions 1. ICT is non-web software that provides a user interface. 2. The user interface is closed to assistive technologies for screen reading. 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
11.1.2.4 Captions (live) Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 1.2.4 Captions (Live). NOTE: The WCAG 2.1 definition of "captions" notes that "in some countries, captions are called subtitles". They are also sometimes referred to as	**C.11.1.2.4 Captions (live)** Type of assessment Inspection Pre-conditions

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"subtitles for the hearing impaired". Per the definition in WCAG 2.1, 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". **WCAG 2.1 Success Criterion 1.2.4 Captions (Live)** Understanding Captions (Live) How to Meet Captions (Live) (Level AA) Captions are provided for all live audio content in synchronized media.	1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 1.2.4 Captions (Live). Result Pass: Check 1 is true Fail: Check 1 is false
11.1.2.5 Audio description (prerecorded) Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded). NOTE 1: The WCAG 2.1 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. **WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded).** Understanding Audio Description (Prerecorded) How to Meet Audio Description (Prerecorded) (Level AA) Audio description is provided for all prerecorded video content in synchronized media.	**C.11.1.2.5 Audio description (prerecorded)** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 1.2.5 Audio Description (Prerecorded). Result Pass: Check 1 is true Fail: Check 1 is false
11.1.3 Adaptable	---
11.1.3.1 Info and relationships	---
11.1.3.1.1 Info and relationships (open functionality)	**C.11.1.3.1.1 Info and relationships (open functionality)** Type of assessment

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Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading, it shall satisfy the WCAG 2.1 Success Criterion 1.3.1 Info and Relationships. NOTE: In software, programmatic determinability is best achieved through the use of accessibility services provided by platform software to enable interoperability between software and assistive technologies and accessibility features of software. (see clause 11.5 Interoperability with assistive technology). **WCAG 2.1 Success Criterion 1.3.1 Info and Relationships** Understanding Info and Relationships How to Meet Info and Relationships (Level A) Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.	Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 1.3.1 Info and Relationships. Result Pass: Check 1 is true Fail: Check 1 is false
11.1.3.1.2 Info and relationships (closed functionality) Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading and where 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 legally blind 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.	**C.11.1.3.1.2 Info and relationships (closed functionality)** This clause is informative only and contains no requirements requiring test.
11.1.3.2 Meaningful sequence	---
11.1.3.2.1 Meaningful sequence (open functionality)	**C.11.1.3.2.1 Meaningful sequence (open functionality)** Type of assessment

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Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading, it shall satisfy the WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence. **WCAG 2.1 Success Criterion 1.3.2 Meaningful Sequence** Understanding Meaningful Sequence How to Meet Meaningful Sequence (Level A) When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.	Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 1.3.2 Meaningful Sequence. Result Pass: Check 1 is true Fail: Check 1 is false
11.1.3.2.2 Meaningful sequence (closed functionality) Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading and where 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 legally blind 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.	**C.11.1.3.2.2 Meaningful sequence (closed functionality)** This clause is informative only and contains no requirements requiring test.
11.1.3.3 Sensory characteristics Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics. **Success Criterion 1.3.3 Sensory Characteristics** Understanding Sensory Characteristics	**C.11.1.3.3 Sensory characteristics** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface.

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How to Meet Sensory Characteristics (Level A) Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, color, size, visual location, orientation, or sound.	Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 1.3.3 Sensory Characteristics. Result Pass: Check 1 is true Fail: Check 1 is false
11.1.3.4 Orientation Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 1.3.4 Orientation. **WCAG 2.1 Success Criterion 1.3.4 Orientation** Understanding Orientation How to Meet Orientation (Level AA) Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential. Note: Examples where a particular display orientation may be essential are a bank check, a piano application, slides for a projector or television, or virtual reality content where binary display orientation is not applicable.	**C.11.1.3.4 Orientation** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 1.3.4 Orientation. Result Pass: Check 1 is true Fail: Check 1 is false
11.1.3.5 Identify input purpose Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose. **WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose** Understanding Identify Input Purpose How to Meet Identify Input Purpose (Level AA) The purpose of each input field collecting information about the user can be programmatically determined when:	**C.11.1.3.5 Identify input purpose** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 1.3.5 Identify Input Purpose.

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• The input field serves a purpose identified in the Input Purposes for User Interface Components section; and • The content is implemented using technologies with support for identifying the expected meaning for form input data.	Result Pass: Check 1 is true Fail: Check 1 is false
11.1.4 Distinguishable	---
11.1.4.1 Use of colour Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 1.4.1 Use of Color. **WCAG 2.1 Success Criterion 1.4.1 Use of Color** Understanding Use of Color How to Meet Use of Color (Level A) Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Note: This success criterion addresses color perception specifically. Other forms of perception are covered in Guideline 1.3 including programmatic access to color and other visual presentation coding.	**C.11.1.4.1 Use of colour** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 1.4.1 Use of Color. Result Pass: Check 1 is true Fail: Check 1 is false
11.1.4.2 Audio control Where ICT is non-web software that provides a user interface, it 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.	**C.11.1.4.2 Audio control** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail the Success Criterion in Table 11.1. Result Pass: Check 1 is true

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NOTE 2: This success criterion is identical to the WCAG 2.1 Success Criterion 1.4.2 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. **WCAG 2.1 Success Criterion 1.4.2 Audio Control** Understanding Audio Control How to Meet Audio Control (Level A)	Fail: Check 1 is false
11.1.4.3 Contrast (minimum) Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum). **WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum)** Understanding Contrast (Minimum) How to Meet Contrast (Minimum) (Level AA) The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following: • Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1; • Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. • Logotypes: Text that is part of a logo or brand name has no contrast requirement.	**C.11.1.4.3 Contrast (minimum)** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 1.4.3 Contrast (Minimum). Result Pass: Check 1 is true Fail: Check 1 is false
11.1.4.4 Resize text	---
11.1.4.4.1 Resize text (open functionality)	**C.11.1.4.4.1 Resize text (open functionality)** Type of assessment

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Where ICT is non-web software that provides a user interface and that supports access to enlargement features of platform or assistive technology, it shall satisfy the WCAG 2.1 Success Criterion 1.4.4 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. **WCAG 2.1 Success Criterion 1.4.4 Resize text** Understanding Resize text How to Meet Resize text (Level AA) Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality.	Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. 2. The software provides support to enlargement features of platform or assistive technology. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 1.4.4 Resize text. Result Pass: Check 1 is true Fail: Check 1 is false
11.1.4.4.2 Resize text (closed functionality) Where ICT is non-web software that provides a user interface which is not able to access the enlargement features of platform or assistive technology, it shall meet requirement 5.1.4 (Functionality closed to text enlargement). NOTE: Because the text rendering support in a closed environment may be more limited than the support found in user agents for the Web, meeting 11.1.4.4.2 in a closed environment may place a much heavier burden on the content author.	**C.11.1.4.4.2 Resize text (closed functionality)** Type of assessment Inspection and measurement Pre-conditions 1. ICT is non-web software that provides a user interface. 2. The user interface is closed to enlargement features of platform or assistive technology. 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.

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	Result Pass: Check 2 is true Fail: Check 2 is false
11.1.4.5 Images of text	---
11.1.4.5.1 Images of text (open functionality) Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading, it shall satisfy the WCAG 2.1 Success Criterion 1.4.5 Images of Text. **Criterion 1.4.5 Images of Text.** Understanding Images of Text How to Meet Images of Text (Level AA) If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following: • Customizable: The image of text can be visually customized to the user's requirements; • Essential: A particular presentation of text is essential to the information being conveyed. Note: Logotypes (text that is part of a logo or brand name) are considered essential.	**C.11.1.4.5.1 Images of text (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 1.4.5 Images of Text. Result Pass: Check 1 is true Fail: Check 1 is false
11.1.4.5.2 Images of text (closed functionality) Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading, it does not need to meet the WCAG 2.1 Success Criterion 1.4.5 Images of Text because there is no need to impose a requirement on all closed functionality that text displayed on the screen actually be represented internally as text (as defined by WCAG 2.1), given that there is no interoperability with assistive technology. **Criterion 1.4.5 Images of Text.** Understanding Images of Text	**C.11.1.4.5.2 Images of text (closed functionality)** This clause is informative only and contains no requirements requiring test.

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How to Meet Images of Text (Level AA) If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following: • Customizable: The image of text can be visually customized to the user's requirements; • Essential: A particular presentation of text is essential to the information being conveyed. Note: Logotypes (text that is part of a logo or brand name) are considered essential.	
11.1.4.10 Reflow	---
11.1.4.10.1 Reflow (open functionality) Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading, it shall satisfy the success criterion in Table 11.2. **Table 11.2: Document success criterion: Reflow (open functionality)** 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 1280 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 1024 px at 400% zoom. NOTE 2: Examples of content which require two-dimensional layout are images, maps, diagrams, video, games, presentations, data tables, and	**C.11.1.4.10.1 Reflow (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is 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 11.2 Result Pass: Check 1 is true Fail: Check 1 is false

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interfaces where it is necessary to keep toolbars in view while manipulating content. NOTE 3: This success criterion is identical to the WCAG 2.1 Success Criterion 1.4.10 Reflow replacing the original WCAG 2.1 notes with notes 1 and 2, above. **WCAG 2.1 Success Criterion 1.4.10 Reflow** Understanding Reflow How to Meet Reflow (Level AA)	
11.1.4.10.2 Reflow (closed functionality) Where ICT is non-web software that provides a user interface which is not able to access the enlargement features of platform or assistive technology, it shall meet requirement 5.1.4 (Functionality closed to text enlargement).	**C.11.1.4.10.2 Reflow (closed functionality)** Type of assessment Inspection and measurement Pre-conditions 1. The ICT is non-web software that provides a user interface. 2. A functionality of the ICT is closed to enlargement features of platform or assistive technology. 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
11.1.4.11 Non-text contrast Where ICT is non-web software that provides a user interface, it shall satisfy WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast. **WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast**	**C.11.1.4.11 Non-text contrast** Type of assessment Inspection

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Understanding Non-text Contrast How to Meet Non-text Contrast (Level AA) The visual presentation of the following have a contrast ratio of at least 3:1 against adjacent color(s): • User Interface Components: Visual information required to identify user interface components and states, except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author; • Graphical Objects: Parts of graphics required to understand the content, except when a particular presentation of graphics is essential to the information being conveyed.	Pre-conditions 1. The ICT is 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 WCAG 2.1 Success Criterion 1.4.11 Non-text Contrast. Result Pass: Check 1 is true Fail: Check 1 is false
11.1.4.12 Text spacing Where ICT is non-web software that provides a user interface and that does not have a fixed size content layout area that is essential to the information being conveyed, it shall satisfy WCAG 2.1 Success Criterion 1.4.12 Text spacing. **WCAG 2.1 Success Criterion 1.4.12 Text spacing** Understanding Text Spacing How to Meet Text Spacing (Level AA) In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all of the following and by changing no other style property: • Line height (line spacing) to at least 1.5 times the font size; • Spacing following paragraphs to at least 2 times the font size; • Letter spacing (tracking) to at least 0.12 times the font size; • Word spacing to at least 0.16 times the font size.	**C.11.1.4.12 Text spacing** Type of assessment Inspection Pre-conditions 1. The ICT is 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 WCAG 2.1 Success Criterion 1.4.12 Text spacing. Result Pass: Check 1 is true Fail: Check 1 is false

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Exception: Human languages and scripts that do not make use of one or more of these text style properties in written text can conform using only the properties that exist for that combination of language and script.	
11.1.4.13 Content on hover or focus Where ICT is a non-web software that provides a user interface, it shall satisfy WCAG 2.1 Success Criterion 1.4.13 Content on hover or focus. **WCAG 2.1 Success Criterion 1.4.13 Content on Hover or Focus** Understanding Content on Hover or Focus How to Meet Content on Hover or Focus (Level AA) Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true: • Dismissable: A mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the additional content communicates an input error or does not obscure or replace other content; • Hoverable: If pointer hover can trigger the additional content, then the pointer can be moved over the additional content without the additional content disappearing; • Persistent: The additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid. Exception: The visual presentation of the additional content is controlled by the user agent and is not modified by the author. Note: Examples of additional content controlled by the user agent include browser tooltips created through use of the HTML title attribute. Note: Custom tooltips, sub-menus, and other nonmodal popups that display on hover and focus are examples of additional content covered by this criterion.	**C.11.1.4.13 Content on hover or focus** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 1.4.13 Content on hover or focus. Result Pass: Check 1 is true Fail: Check 1 is false
11.2 Operable	---

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11.2.1 Keyboard accessible	---
11.2.1.1 Keyboard	---
11.2.1.1.1 Keyboard (open functionality) Where ICT is non-web software that provides a user interface and that supports access to keyboards or a keyboard interface, it shall satisfy the WCAG 2.1 Success Criterion 2.1.1 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. **WCAG 2.1 Success Criterion 2.1.1 Keyboard** Understanding Keyboard How to Meet Keyboard (Level A) All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. Note: This exception relates to the underlying function, not the input technique. For example, if using handwriting to enter text, the input technique (handwriting) requires path-dependent input but the underlying function (text input) does not. Note: This does not forbid and should not discourage providing mouse input or other input methods in addition to keyboard operation.	**C.11.2.1.1.1 Keyboard (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. 2. The software provides support to keyboards or a keyboard interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 2.1.1 Keyboard. Result Pass: Check 1 is true Fail: Check 1 is false
11.2.1.1.2 Keyboard (closed functionality) Where ICT is non-web software that provides a user interface which is closed to keyboards or keyboard interface, it shall meet requirement 5.1.6.1 (Operation without keyboard interface: Closed functionality).	**C.11.2.1.1.2 Keyboard (closed functionality)** Type of assessment Inspection Pre-conditions

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	1. ICT is non-web software that provides a user interface. 2. The user interface is closed to keyboards or keyboard interfaces. Procedure 1. Check that all functionality of the user interface is operable without vision. Result Pass: Check 1 is true Fail: Check 1 is false
11.2.1.2 No keyboard trap Where ICT is non-web software that provides a user interface, it 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 2.1 Success Criterion 2.1.2 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". **WCAG 2.1 Success Criterion 2.1.2 No Keyboard Trap** Understanding No Keyboard Trap How to Meet No Keyboard Trap	**C.11.2.1.2 No keyboard trap** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail the Success Criterion in Table 11.3. Result Pass: Check 1 is true Fail: Check 1 is false

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(Level A)	
11.2.1.4 Character key shortcuts	---
11.2.1.4.1 Character key shortcuts (open functionality) Where ICT is non-web software that provides a user interface, it shall satisfy WCAG 2.1 Success Criterion 2.1.4 Character Key Shortcuts. **WCAG 2.1 Success Criterion 2.1.4 Character Key Shortcuts** Understanding Character Key Shortcuts How to Meet Character Key Shortcuts (Level A) If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true: • Turn off: A mechanism is available to turn the shortcut off; • Remap: A mechanism is available to remap the shortcut to use one or more non-printable keyboard characters (e.g. Ctrl, Alt, etc.); • Active only on focus: The keyboard shortcut for a user interface component is only active when that component has focus.	**C.11.2.1.4.1 Character key shortcuts (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 2.1.4 Character Key Shortcuts. Result Pass: Check 1 is true Fail: Check 1 is false
11.2.1.4.2 Character key shortcuts (closed functionality) Where ICT is non-web software that provides a user interface which is closed to keyboards or keyboard interface, it shall meet requirement 5.1.6.1 (Operation without keyboard interface: Closed functionality).	**C.11.2.1.4.2 Character key shortcuts (closed functionality)** Type of assessment Inspection Pre-conditions 1. 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

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11.2.2 Enough time	---
11.2.2.1 Timing adjustable Where ICT is non-web software that provides a user interface, it 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 2.1 Success Criterion 3.2.1, 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 2.1 Success Criterion 2.2.1 Timing Adjustable replacing "the content" with "software" and with the words "WCAG 2.1" added before the word "Success Criterion" in note 1 above. **WCAG 2.1 Success Criterion 2.2.1 Timing Adjustable**	**C.11.2.2.1 Timing adjustable** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail the Success Criterion in Table 11.4. Result Pass: Check 1 is true Fail: Check 1 is false

EN 301 549 clause	Determination of compliance
Understanding Timing Adjustable How to Meet Timing Adjustable (Level A)	
11.2.2.2 Pause, stop, hide Where ICT is non-web software that provides a user interface, it 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 2.1 Guideline 2.3. 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 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	**C.11.2.2.2 Pause, stop, hide** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail the Success Criterion in Table 11.5. Result Pass: Check 1 is true Fail: Check 1 is false

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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 2.1 Success Criterion 2.2.2 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 2.1" 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. **WCAG 2.1 Success Criterion 2.2.2 Pause, Stop, Hide** Understanding Pause, Stop, Hide How to Meet Pause, Stop, Hide (Level A)	
11.2.3 Seizures and physical reactions	---
11.2.3.1 Three flashes or below threshold Where ICT is non-web software that provides a user interface, it 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	**C.11.2.3.1 Three flashes or below threshold** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail the Success Criterion in Table 11.6. Result Pass: Check 1 is true

EN 301 549 clause	Determination of compliance
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 2.1 Success Criterion 2.3.1 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". **WCAG 2.1 Success Criterion 2.3.1 Three Flashes or Below Threshold** Understanding Three Flashes or Below Threshold How to Meet Three Flashes or Below Threshold (Level A)	Fail: Check 1 is false
11.2.4 Navigable	---
11.2.4.3 Focus order Where ICT is non-web software that provides a user interface, it 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 2.1 Success Criterion 2.4.3 Focus order replacing "Web page" with "software". **WCAG 2.1 Success Criterion 2.4.3 Focus Order** Understanding Focus Order How to Meet Focus Order (Level A)	**C.11.2.4.3 Focus order** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail the Success Criterion in Table 11.7. Result Pass: Check 1 is true Fail: Check 1 is false
11.2.4.4 Link purpose (in context) Where ICT is non-web software that provides a user interface, it shall satisfy WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context).	**C.11.2.4.4 Link purpose (in context)** Type of assessment Inspection

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WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context) Understanding Link Purpose (In Context) How to Meet Link Purpose (In Context) (Level A) The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general.	Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 2.4.4 Link Purpose (In Context). Result Pass: Check 1 is true Fail: Check 1 is false
11.2.4.6 Headings and labels Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 2.4.6 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. **WCAG 2.1 Success Criterion 2.4.6 Headings and Labels** Understanding Headings and Labels How to Meet Headings and Labels (Level AA) Headings and labels describe topic or purpose.	**C.11.2.4.6 Headings and labels** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 2.4.6 Headings and Labels. Result Pass: Check 1 is true Fail: Check 1 is false
11.2.4.7 Focus visible Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 2.4.7 Focus Visible. **WCAG 2.1 Success Criterion 2.4.7 Focus Visible** Understanding Focus Visible How to Meet Focus Visible (Level AA)	**C.11.2.4.7 Focus visible** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure

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Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.	1. Check that the software does not fail WCAG 2.1 Success Criterion 2.4.7 Focus Visible. Result Pass: Check 1 is true Fail: Check 1 is false
11.2.5 Input modalities	---
11.2.5.1 Pointer gestures Where ICT is non-web software that provides a user interface, it 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 2.1 Success Criterion 2.5.1 Pointer Gestures replacing the original WCAG 2.1 note with note 1 above. **WCAG 2.1 Success Criterion 2.5.1 Pointer Gestures** Understanding Pointer Gestures How to Meet Pointer Gestures (Level A)	**C.11.2.5.1 Pointer gestures** Type of assessment Inspection Pre-conditions 1. The ICT is 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. Result Pass: Check 1 is true Fail: Check 1 is false
11.2.5.2 Pointer cancellation Where ICT is non-web software that provides a user interface, it 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:	**C.11.2.5.2 Pointer cancellation** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface.

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• 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 2.1 Success Criterion 2.5.2 Pointer Cancellation replacing the original WCAG 2.1 note with notes 1 and 2 above. **WCAG 2.1 Success Criterion 2.5.2 Pointer Cancellation** Understanding Pointer Cancellation How to Meet Pointer Cancellation (Level A)	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. Result Pass: Check 1 is true Fail: Check 1 is false
11.2.5.3 Label in name Where ICT is non-web software that provides a user interface, it shall satisfy WCAG 2.1 Success Criterion 2.5.3 Label in Name. **WCAG 2.1 Success Criterion 2.5.3 Label in Name** Understanding Label in Name How to Meet Label in Name (Level A) For user interface components with labels that include text or images of text, the name contains the text that is presented visually.	**C.11.2.5.3 Label in name** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 2.5.3 Label in Name.

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Note: A best practice is to have the text of the label at the start of the name.	Result Pass: Check 1 is true Fail: Check 1 is false
11.2.5.4 Motion actuation Where ICT is non-web software that provides a user interface, it shall satisfy WCAG 2.1 Success Criterion 2.5.4 Motion Actuation. **WCAG 2.1 Success Criterion 2.5.4 Motion Actuation** Understanding Motion Actuation How to Meet Motion Actuation (Level A) Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when: • Supported Interface: The motion is used to operate functionality through an accessibility supported interface; • Essential: The motion is essential for the function and doing so would invalidate the activity.	**C.11.2.5.4 Motion actuation** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 2.5.4 Motion Actuation. Result Pass: Check 1 is true Fail: Check 1 is false
11.3 Understandable	---
11.3.1 Readable	---
11.3.1.1 Language of software	---
11.3.1.1.1 Language of software (open functionality) Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading, it 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.	**C.11.3.1.1.1 Language of software (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. 2. The software provides support to assistive technologies for screen reading.

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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 2.1 Success Criterion 3.1.1 Language of page, replacing "each web page" with "software" and with the addition of note 1 above. **WCAG 2.1 Success Criterion 3.1.1 Language of Page** Understanding Language of Page How to Meet Language of Page (Level A)	Procedure 1. Check that the software does not fail the Success Criterion in Table 11.10. Result Pass: Check 1 is true Fail: Check 1 is false
11.3.1.1.2 Language of software (closed functionality) Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading, it shall meet requirement 5.1.3.14 (Spoken languages).	**C.11.3.1.1.2 Language of software (closed functionality)** Type of assessment Testing Pre-conditions 1. ICT is non-web software that provides a user interface. 2. The user interface is closed to assistive technologies for screen reading. 3. The speech output is provided as non-visual access to closed functionality. 4. 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. 5. The content is not generated externally and is under the control of the ICT vendor. 6. The displayed languages can be selected using non-visual access.

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	7. 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
11.3.2 Predictable	---
11.3.2.1 On focus Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 3.2.1 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 menus 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 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. **WCAG 2.1 Success Criterion 3.2.1 On Focus** Understanding On Focus How to Meet On Focus (Level A) When any user interface component receives focus, it does not initiate a change of context.	**C.11.3.2.1 On focus** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 3.2.1 On Focus. Result Pass: Check 1 is true Fail: Check 1 is false
11.3.2.2 On input	**C.11.3.2.2 On input**

EN 301 549 clause	Determination of compliance
Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 3.2.2 On Input. **WCAG 2.1 Success Criterion 3.2.2 On Input** Understanding On Input How to Meet On Input (Level A) Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component.	Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 3.2.2 On Input. Result Pass: Check 1 is true Fail: Check 1 is false
11.3.3 Input assistance	---
11.3.3.1 Error identification	---
11.3.3.1.1 Error identification (open functionality) Where ICT is non-web software that provides a user interface and that supports access to assistive technologies for screen reading, it shall satisfy the WCAG 2.1 Success Criterion 3.3.1 Error Identification. **WCAG 2.1 Success Criterion 3.3.1 Error Identification** Understanding Error Identification How to Meet Error Identification (Level A) If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text.	**C.11.3.3.1.1 Error identification (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is 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 2.1 Success Criterion 3.3.1 Error Identification. Result Pass: Check 1 is true Fail: Check 1 is false
11.3.3.1.2 Error Identification (closed functionality)	**C.11.3.3.1.2 Error Identification (closed functionality)**

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Where ICT is non-web software that provides a user interface which is closed to assistive technologies for screen reading, it shall meet requirement 5.1.3.15 (Non-visual error identification).	Type of assessment Testing Pre-conditions 1. ICT is non-web software that provides a user interface. 2. The user interface is closed to assistive technologies for screen reading. 3. Speech output is provided as non-visual access to closed functionality. 4. 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
11.3.3.2 Labels or instructions Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions. **WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions** Understanding Labels or Instructions How to Meet Labels or Instructions (Level A) Labels or instructions are provided when content requires user input.	**C.11.3.3.2 Labels or instructions** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion 3.3.2 Labels or Instructions. Result Pass: Check 1 is true Fail: Check 1 is false
11.3.3.3 Error suggestion	**C.11.3.3.3 Error suggestion**

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Where ICT is non-web software that provides a user interface, it shall satisfy the WCAG 2.1 Success Criterion 3.3.3 Error Suggestion. **WCAG 2.1 Success Criterion 3.3.3 Error Suggestion** Understanding Error Suggestion How to Meet Error Suggestion (Level AA) If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content.	Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail WCAG 2.1 Success Criterion WCAG 2.1 Success Criterion 3.3.3 Error Suggestion. Result Pass: Check 1 is true Fail: Check 1 is false
11.3.3.4 Error prevention (legal, financial, data) Where ICT is non-web software that provides a user interface, it 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 2.1 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data) replacing "web pages" with "software". **WCAG 2.1 Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data)**	**C.11.3.3.4 Error prevention (legal, financial, data)** Type of assessment Inspection Pre-conditions 1. The ICT is non-web software that provides a user interface. Procedure 1. Check that the software does not fail the Success Criterion in Table 11.11. Result Pass: Check 1 is true Fail: Check 1 is false

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Understanding Error Prevention (Legal, Financial, Data) How to Meet Error Prevention (Legal, Financial, Data) (Level AA)	
11.4 Robust	---
11.4.1 Compatible	---
11.4.1.1 Parsing	---
11.4.1.1.1 Parsing (open functionality) Where ICT is non-web software that provides a user interface and that supports access to any assistive technologies, it shall satisfy the success criterion in Table 11.12. **Table 11.12: Software success criterion: Parsing** For software that uses markup languages, in such a way that the markup is separately exposed and available to assistive technologies and accessibility features of software or to a user-selectable user agent, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features. NOTE 1: Start and end tags that are missing a critical character in their formation, such as a closing angle bracket or a mismatched attribute value quotation mark are not complete. NOTE 2: Markup is not always available to assistive technology or to user selectable user agents such as browsers. In such cases, conformance to this provision would have no impact on accessibility as it can for web content where it is exposed. NOTE 3: Examples of markup that is separately exposed and available to assistive technologies and to user agents include but are not limited to: documents encoded in HTML, ODF, and OOXML. In these examples, the markup can be parsed entirely in two ways: (a) by assistive technologies which may directly open the document, (b) by assistive technologies using DOM APIs of user agents for these document formats. NOTE 4: Examples of markup used internally for persistence of the software user interface that are never exposed to assistive technology include but are	**C.11.4.1.1.1 Parsing (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is 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. Result Pass: Check 1 is true Fail: Check 1 is false

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not limited to: XUL, GladeXML, and FXML. In these examples assistive technology only interacts with the user interface of generated software. NOTE 5: This success criterion is identical to the WCAG 2.1 Success Criterion 4.1.1 Parsing replacing "In content implemented using markup languages" with "For software that uses markup languages, in such a way that the markup is separately exposed and available to assistive technologies and accessibility features of software or to a user-selectable user agent" with the addition of notes 2, 3 and 4 above. **WCAG 2.1 Success Criterion 4.1.1 Parsing** Understanding Parsing How to Meet Parsing (Level A)	
11.4.1.1.2 Parsing (closed functionality) Where ICT is non-web software that provides a user interface which is closed to all assistive technology it shall not have to meet the "Parsing" success criterion in Table 11.10 because the intent of this success criterion is to provide consistency so that different user agents or assistive technologies will yield the same result.	**C.11.4.1.1.2 Parsing (closed functionality)** Clause 11.4.1.1.2 contains no requirements requiring test.
11.4.1.2 Name, role, value	---
11.4.1.2.1 Name, role, value (open functionality) Where ICT is non-web software that provides a user interface and that supports access to any assistive technologies, it shall satisfy the success criterion in Table 11.13. **Table 11.13: 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	**C.11.4.1.2.1 Name, role, value (open functionality)** Type of assessment Inspection Pre-conditions 1. The ICT is 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 11.13. Result

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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 2.1 Success Criterion 4.1.2 Name, Role, Value replacing the original WCAG 2.1 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. **WCAG 2.1 Success Criterion 4.1.2 Name, Role, Value** Understanding Name, Role, Value How to Meet Name, Role, Value (Level A)	Pass: Check 1 is true Fail: Check 1 is false
11.4.1.2.2 Name, role, value (closed functionality) Where ICT is non-web software that provides a user interface which is closed to all assistive technology it shall not have to meet the "Name, role, value" success criterion in Table 11.11 because this success criterion requires information in a programmatically determinable form.	**C.11.4.1.2.2 Name, role, value (closed functionality)** Clause 11.4.1.2.2 contains no requirements requiring test.
11.5 Interoperability with assistive technology	---
11.5.1 Closed functionality Where the closed functionality of software conforms to clause 5.1 (Closed functionality) it shall not be required to conform with clause 11.5.2 to clause 11.5.2.17.	**C.11.5.1 Closed functionality** Type of assessment Inspection

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	Pre-conditions 1. The software has closed functionality. Procedure 1. Check that the closed functionality conforms to clause 5.1. Result If check 1 is true, the software is not required to conform to clauses 11.5.2 to 11.5.17 If check 1 is false the software is required to conform to clauses 11.5.2 to 11.5.17
11.5.2 Accessibility services	---
11.5.2.1 Platform accessibility service support for software that provides a user interface Platform software shall provide a set of documented platform services that enable software that provides a user interface running on the platform software to interoperate with assistive technology. Platform software should support requirements 11.5.2.5 to 11.5.2.17 except that, where a user interface concept that corresponds to one of the clauses 11.5.2.5 to 11.5.2.17 is not supported within the software environment, these requirements are not applicable. For example, selection attributes from 11.5.2.14 (Modification of focus and selection attributes) may not exist in environments that do not allow selection, which is most commonly associated with copy and paste. NOTE 1: These define the minimum functionality of software providing user interfaces when using platform services. NOTE 2: In some platforms these services may be called accessibility services, but in some other platforms these services may be provided as part of the user interface services. NOTE 3: User interface services that provide accessibility support by default are considered to be part of the services provided to conform to this clause (e.g. the service for creating a new user interface element provides role, state, boundary, name and description).	**C.11.5.2.1 Platform accessibility service support for software that provides a user interface** Type of assessment Inspection Pre-conditions 1. The software evaluated is platform software. Procedure 1. Check that the platform software documentation includes information about platform services that may be used by software that provides a user interface to interoperate with assistive technology. Result Pass: Check 1 is true Fail: Check 1 is false

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NOTE 4: To comply with this requirement the platform software can provide its own set of services or expose the services provided by its underlying platform layers, if those services conform to this requirement. NOTE 5: Within specific programming environments, the technical attributes associated with the user interface properties described in clauses 11.5.2.5 to 11.5.2.17 might have different names than those used within the clauses.	
11.5.2.2 Platform accessibility service support for assistive technologies Platform software shall provide a set of documented platform accessibility services that enable assistive technology to interoperate with software that provides a user interface running on the platform software. Platform software should support the requirements of clauses 11.5.2.5 to 11.5.2.17 except that, where a user interface concept that corresponds to one of the clauses 11.5.2.5 to 11.5.2.17 is not supported within the software environment, these requirement are not applicable. For example, selection attributes from 11.5.2.14 (Modification of focus and selection attributes) may not exist in environments that do not allow selection, which is most commonly associated with copy and paste. NOTE 1: These define the minimum functionality available to assistive technologies when using platform services. NOTE 2: 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. NOTE 3: In some platforms these services may be called accessibility services, but in some other platforms these services may be provided as part of the user interface services. NOTE 4: Typically these services belong to the same set of services that are described in clause 11.5.2.1. NOTE 5: To comply with this requirement the platform software can provide its own set of services or expose the services provided by its underlying platform layers, if those services conform to this requirement.	**C.11.5.2.2 Platform accessibility service support for assistive technologies** Type of assessment Inspection Pre-conditions 1. The software evaluated is platform software. Procedure 1. Check that the platform software documentation includes information about platform accessibility services that enables assistive technology to interoperate with software that provides a user interface running on the platform software. Result Pass: Check 1 is true Fail: Check 1 is false
11.5.2.3 Use of accessibility services Where the software provides a user interface it shall use the applicable documented platform accessibility services. If the documented platform	**C.11.5.2.3 Use of accessibility services** Type of assessment

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accessibility services do not allow the software to meet the applicable requirements of clauses 11.5.2.5 to 11.5.2.17, then software that provides a user interface shall use other documented services to interoperate with assistive technology. NOTE: The term "documented platform accessibility services" refers to the set of services provided by the platform according to clauses 11.5.2.1 and 11.5.2.2. It is best practice to develop software using toolkits that automatically implement the underlying platform accessibility services.	Inspection Pre-conditions 1. The software evaluated is software that provides a user interface. Procedure 1. Check that the software uses the applicable documented platform accessibility services. 2. Check that the software can meet the applicable requirements 11.5.2.5 to 11.5.2.17 whilst using the documented platform accessibility services. 3. Check that the software can meet requirements 11.5.2.5 to 11.5.2.17 whilst using the documented platform accessibility services and other documented services. Result Pass: Check 1 is true and check 2 or check 3 is true Fail: Check 1 or check 3 is false
11.5.2.4 Assistive technology Where the ICT is assistive technology it shall use the documented platform accessibility services. NOTE 1: The term "documented platform accessibility services" refers to the set of services provided by the platform according to clauses 11.5.2.1 and 11.5.2.2. NOTE 2: Assistive technology can also use other documented accessibility services.	**C.11.5.2.4 Assistive technology** Type of assessment Inspection Pre-conditions 1. The ICT is assistive technology. Procedure 1. Check that the assistive technology uses the documented platform accessibility services. Result Pass: Check 1 is true Fail: Check 1 is false
11.5.2.5 Object information	**C.11.5.2.5 Object information** Type of assessment

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Where the software provides a user interface it shall, by using the services as described in clause 11.5.2.3, make the user interface elements' role, state(s), boundary, name, and description programmatically determinable by assistive technologies.	Inspection Pre-conditions 1. The software evaluated is software that provides a user interface. Procedure 1. Check that the user interface element's role is programmatically determinable by assistive technologies. 2. Check that the user interface element's state(s) is programmatically determinable by assistive technologies. 3. Check that the user interface element's boundary is programmatically determinable by assistive technologies. 4. Check that the user interface element's name is programmatically determinable by assistive technologies. 5. Check that the user interface element's description is programmatically determinable by assistive technologies. Result Pass: Checks 1, 2, 3, 4 and 5 are true Fail: Check 1 or 2 or 3 or 4 or 5 is false
11.5.2.6 Row, column, and headers Where the software provides a user interface it 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 by assistive technologies.	**C.11.5.2.6 Row, column, and headers** Type of assessment Inspection Pre-conditions 1. The software evaluated is software that provides a user interface. 2. There are data tables in the user interface. Procedure 1. Select a data table in which the tests are to be performed. 2. Check that each cell's row is programmatically determinable by assistive technologies.

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	3. Check that each cell's column is programmatically determinable by assistive technologies. 4. Check that each cell's row header, if the row header exists, is programmatically determinable by assistive technologies. 5. Check that each cell's column header, if the column header exists, is programmatically determinable by assistive technologies. Result Pass: Checks 2, 3, 4 and 5 are true Fail: Check 2 or 3 or 4 or 5 is false
11.5.2.7 Values Where the software provides a user interface, it shall, by using the services as described in clause 11.5.2.3, make the current value of a user interface element and any minimum or maximum values of the range, if the user interface element conveys information about a range of values, programmatically determinable by assistive technologies.	**C.11.5.2.7 Values** Type of assessment Inspection Pre-conditions 1. The software evaluated is software that provides a user interface. 2. There are user interface elements that can have values. Procedure 1. Select a user interface element that can have a value. 2. Check that the current value is programmatically determinable by assistive technologies. 3. If the user interface element conveys information about a range of values, check that the minimum value is programmatically determinable by assistive technologies. 4. If the user interface element conveys information about a range of values, check that the maximum value is programmatically determinable by assistive technologies. Result Pass: Checks 2, 3 and 4 are true Fail: Check 2 or 3 or 4 is false

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11.5.2.8 Label relationships Where the software provides a user interface it shall expose the relationship that a user interface element 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 by assistive technologies.	**C.11.5.2.8 Label relationships** Type of assessment Inspection Pre-conditions 1. The software evaluated is software that provides a user interface. 2. There are user interface elements that are labels of other user interface elements. Procedure 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 assistive technologies. 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 assistive technologies. Result Pass: Checks 2 or 3 are true Fail: Check 2 and 3 are false
11.5.2.9 Parent-child relationships Where the software provides a user interface it shall, by using the services as described in clause 11.5.2.3, make the relationship between a user interface element and any parent or children elements programmatically determinable by assistive technologies.	**C.11.5.2.9 Parent-child relationships** Type of assessment Inspection Pre-conditions 1. The software evaluated is software that provides a user interface. 2. There are user interface elements that are parents of other user interface elements in a hierarchical structure. Procedure

EN 301 549 clause	Determination of compliance
	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 assistive technologies. 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 assistive technologies. 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 assistive technologies. 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 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.
11.5.2.10 Text Where the software provides a user interface it shall, by using the services as described in clause 11.5.2.3, make the text contents, text attributes, and the boundary of text rendered to the screen programmatically determinable by assistive technologies.	**C.11.5.2.10 Text** Type of assessment Inspection Pre-conditions 1. The software evaluated is software that provides a user interface. 2. There is text rendered to the screen. Procedure

EN 301 549 clause	Determination of compliance
	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 assistive technologies. 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 assistive technologies. 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 assistive technologies. Result Pass: Checks 1, 2 and 3 are true Fail: Check 1 or 2 or 3 is false
11.5.2.11 List of available actions Where the software provides a user interface it 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, programmatically determinable by assistive technologies.	**C.11.5.2.11 List of available actions** Type of assessment Inspection Pre-conditions 1. The software evaluated is software that provides a user interface. 2. There are user interface elements that have actions that can be executed by the user. Procedure 1. Check that the user interface element's information includes the list of actions that can be executed. 2. Check that this list is programmatically determinable by assistive technologies. Result Pass: Checks 1 and 2 are true Fail: Check 1 or 2 is false
11.5.2.12 Execution of available actions	**C.11.5.2.12 Execution of available actions** Type of assessment

EN 301 549 clause	Determination of compliance
Where permitted by security requirements, software that provides a user interface 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. NOTE 1: In some cases the security requirements imposed on a software product may forbid external software from interfering with the ICT product. 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.	Inspection and testing Pre-conditions 1. The software evaluated is software that provides a user interface. 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 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 assistive technologies. Result Pass: Checks 1 and 2 are true Fail: Check 1 or 2 is false
11.5.2.13 Tracking of focus and selection attributes Where software provides a user interface it 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 programmatically determinable by assistive technologies.	**C.11.5.2.13 Tracking of focus and selection attributes** Type of assessment Inspection and testing Pre-conditions 1. The software evaluated is software that provides a user interface. 2. There are user interface elements that enable text editing. Procedure 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 assistive technologies. 3. Activate those tracking mechanisms.

EN 301 549 clause	Determination of compliance
	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
11.5.2.14 Modification of focus and selection attributes Where permitted by security requirements, software that provides a user interface 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 where the user can modify these items. 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.	**C.11.5.2.14 Modification of focus and selection attributes** Type of assessment Testing Pre-conditions 1. The software evaluated is software that provides a user interface. 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 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 assistive technologies. 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 assistive technologies. 3. For user interface elements that enable text editing, check that the selection attributes can be programmatically modified by assistive technologies where they can be modified by user without the use of assistive technology. Result

EN 301 549 clause	Determination of compliance
	Pass: All checks are true Fail: Any check is false
11.5.2.15 Change notification Where software provides a user interface it shall, by using the services as described in clause 11.5.2.3, notify assistive technologies about changes in those programmatically determinable attributes of user interface elements that are referenced in requirements 11.5.2.5 to 11.5.2.11 and 11.5.2.13.	**C.11.5.2.15 Change notification** Type of assessment Inspection and testing Pre-conditions 1. The software evaluated is software that provides a user interface. Procedure 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 assistive technologies, 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 assistive technologies, if this information changes in the software. 4. Check that notifications about changes in values (current value, minimum value and maximum value) are sent, if this information changes in the software. 5. Check that notifications about changes in label relationships are sent to assistive technologies, if this information changes in the software. 6. Check that notifications about changes in parent-child relationships are sent to assistive technologies, 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 assistive technologies, if this information changes in the software. 8. Check that notifications about changes in the list of available actions are sent to assistive technologies, if this information changes in the software.

EN 301 549 clause	Determination of compliance
	9. Check that notifications about changes in focus, text insertion point and selection attributes are sent to assistive technologies, 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
11.5.2.16 Modifications of states and properties Where permitted by security requirements, software that provides a user interface 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, where the user can modify these items. 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.	**C.11.5.2.16 Modifications of states and properties** Type of assessment Testing Pre-conditions 1. The software evaluated is software that provides a user interface. 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 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 by assistive technologies. 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 by assistive technologies. Result Pass: All checks are true Fail: Any check is false
11.5.2.17 Modifications of values and text Where permitted by security requirements, software that provides a user interface 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	**C.11.5.2.17 Modifications of values and text** Type of assessment Testing

EN 301 549 clause	Determination of compliance
using the input methods of the platform, where a user can modify these items without the use of assistive technology. 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.	Pre-conditions 1. The software evaluated is software that provides a user interface. 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 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 assistive technologies 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 assistive technologies using the input methods of the platform. Result Pass: all checks are true Fail: any check is false
11.6 Documented accessibility usage	---
11.6.1 User control of accessibility features Where software is a platform it shall provide sufficient modes of operation for user control over those platform accessibility features documented as intended for users.	**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 exist where user control over platform features, that are defined in the platform documentation as accessibility features intended for users, is possible.

EN 301 549 clause	Determination of compliance
	Result Pass: Check 1 is true Fail: Check 1 is false
11.6.2 No disruption of accessibility features Where software provides a user interface it shall not disrupt those documented accessibility features that are defined in platform documentation except when requested to do so by the user during the operation of the software.	**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
11.7 User preferences Where software provides a user interface it shall provide sufficient modes of operation that use user preferences for platform settings for colour, contrast, font type, font size, and focus cursor except for software that is designed to be isolated from its underlying platforms. NOTE: Software that is isolated from its underlying platform has no access to user settings in the platform and thus cannot adhere to them.	**C.11.7 User preferences** Type of assessment Inspection and Testing Pre-conditions 1. The software is software that provides a user interface. Procedure 1. Check if the software provides sufficient modes of operation that uses user preferences for platform settings for colour, contrast, font type, font size, and focus cursor. 2. Check that the software documentation indicates that the software is designed to be isolated from its underlying platform.

EN 301 549 clause	Determination of compliance
	Result Pass: Check 1 is true or Check 1 is false and check 2 is true Fail: Check 1 is false and check 2 is false
11.8 Authoring tools	---
11.8.1 Content technology Authoring tools shall conform to clauses 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.	**C.11.8.1 Content technology** Type of assessment Inspection and Testing Pre-conditions 1. The software is an authoring tool. 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 NOTE: Where the output format of the authoring tool does not support certain types of information required for accessibility, compliance with requirements that relate to that type of information is not required.
11.8.2 Accessible content creation Authoring tools shall enable and guide the production of content that conforms to clauses 9 (Web content) or 10 (Non-Web content) 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.	**C.11.8.2 Accessible content creation** Type of assessment Inspection and Testing Pre-conditions 1. The software is an authoring tool. Procedure

EN 301 549 clause	Determination of compliance
	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
11.8.3 Preservation of accessibility information in transformations If the authoring tool provides restructuring transformations or re-coding transformations, then accessibility information shall be preserved in the output if equivalent mechanisms exist in the 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.	**C.11.8.3 Preservation of accessibility information in transformations** Type of assessment Inspection and Testing Pre-conditions 1. The software is an authoring tool. 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 or check 3 is true or checks 3 and 4 are false Fail: Check 1 is false and check 2 is true
11.8.4 Repair assistance	**C.11.8.4 Repair assistance**

EN 301 549 clause	Determination of compliance
If the accessibility checking functionality of an authoring tool can detect that content does not meet a requirement of clauses 9 (Web) or 10 (Non-web documents) as applicable, then 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.	Type of assessment Inspection Pre-conditions 1. The software is an authoring tool. 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
11.8.5 Templates When an authoring tool provides templates, at least one template that supports the creation of content that conforms to the requirements of clauses 9 (Web) or 10 (Non-web documents) as applicable shall be available and identified as such.	**C.11.8.5 Templates** Type of assessment Inspection Pre-conditions 1. The software is an authoring tool. 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 content) or 10 (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

EN 301 549 clause	Determination of compliance
	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 2.1". 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.
12 Documentation and support services	---
12.1 Product documentation	---
12.1.1 Accessibility and compatibility features Product documentation provided with the ICT whether provided separately or integrated within the ICT shall list and explain how to use the accessibility and compatibility features of the ICT. NOTE: Accessibility and compatibility features include accessibility features that are built-in and accessibility features that provide compatibility with assistive technology.	**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
12.1.2 Accessible documentation Product documentation provided with the ICT shall be made available in at least one of the following electronic formats: a. a Web format that conforms to the requirements of clause 9, or b. 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 or printed) that are not accessible.	**C.12.1.2 Accessible documentation** Type of assessment Inspection Pre-conditions 1. Product documentation in electronic format is supplied with the ICT. Procedure

EN 301 549 clause	Determination of compliance
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 cognitive impairments). NOTE 3: Where the documentation is integral to the ICT it will be provided through the user interface which is accessible. NOTE 4: A user agent that supports automatic media conversion would be beneficial to enhancing accessibility.	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
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.	**C.12.2.1 General (informative)** Clause 12.2.1 is informative only and contains no requirements requiring test.
12.2.2 Information on accessibility and compatibility features ICT support services shall provide information on the accessibility and compatibility features that are included 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.	**C.12.2.2 Information on accessibility and compatibility features** Type of assessment Inspection Pre-conditions 1. ICT support services are provided. 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
12.2.3 Effective communication ICT support services shall accommodate the communication needs of individuals with disabilities either directly or through a referral point.	**C.12.2.3 Effective communication** Type of assessment Inspection Pre-conditions

EN 301 549 clause	Determination of compliance
	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 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.
12.2.4 Accessible documentation Documentation provided by support services shall be made available in at least one of the following electronic formats: a. a Web format that conforms to clause 9; or b. 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 cognitive impairments). NOTE 3: A user agent that supports automatic media conversion would be beneficial to enhancing accessibility.	**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
13 ICT providing relay or emergency service access	---
13.1 Relay services requirements	---
13.1.1 General (informative)	**C.13.1.1 General (informative)**

EN 301 549 clause	Determination of compliance
Relay services enable users of different modes of communication e.g. text, sign, speech, to interact remotely through ICT with two-way communication by providing conversion between the modes of communication, normally by a human operator. It is best practice to meet the applicable relay service requirements of ETSI ES 202 975 [i.5].	Clause 13.1.1 is informative only and contains no requirements requiring test.
13.1.2 Text relay services Where ICT is intended to provide a text relay service, the text relay service shall enable text users and speech users to interact by providing conversion between the two modes of communication.	**C.13.1.2 Text relay services** Type of assessment Inspection Pre-conditions 1. The service is a text relay service. Procedure 1. Check that the service enables text users and speech users to interact by providing conversion between the two modes of communication. Result Pass: Check 1 is true Fail: Check 1 is false
13.1.3 Sign relay services Where ICT is intended to provide a sign relay service, the sign relay service shall enable sign language users and speech users to interact by providing conversion between the two modes of communication. NOTE: Sign relay services are also sometimes referred to as sign language relay services or video relay services.	**C.13.1.3 Sign relay services** Type of assessment Inspection Pre-conditions 1. The service is a sign relay service. Procedure 1. Check that the service enables sign language users and speech users to interact by providing conversion between the two modes of communication. Result Pass: Check 1 is true

EN 301 549 clause	Determination of compliance
	Fail: Check 1 is false
13.1.4 Lip-reading relay services Where ICT is intended to provide a lip-reading relay service, the lip-reading service shall enable lip-readers and voice telephone users to interact by providing conversion between the two modes of communication.	**C.13.1.4 Lip-reading relay services** Type of assessment Inspection Pre-conditions 1. The service is a lip-reading relay service. Procedure 1. Check that the service enables lip-readers and voice telephone users to interact by providing conversion between the two modes of communication. Result Pass: Check 1 is true Fail: Check 1 is false
13.1.5 Captioned telephony services Where ICT is intended to provide a captioned telephony service, the captioned telephony service shall assist a deaf or hard of hearing user in a spoken dialogue by providing text captions translating the incoming part of the conversation.	**C.13.1.5 Captioned telephony services** Type of assessment Inspection Pre-conditions 1. The service is a captioned telephony service. Procedure 1. Check that the service assists a deaf or hard of hearing user in a spoken dialogue by providing text captions translating the incoming part of the conversation. Result Pass: Check 1 is true Fail: Check 1 is false
13.1.6 Speech to speech relay services Where ICT is intended to provide a speech to speech relay service, the speech to speech relay service shall enable speech or cognitively impaired	**C.13.1.6 Speech to speech relay services** Type of assessment

EN 301 549 clause	Determination of compliance
telephone users and any other user to communicate by providing assistance between them.	Inspection Pre-conditions 1. The service is a speech to speech relay service. Procedure 1. Check that the service enables enable speech or cognitively impaired telephone users and any other user to communicate by providing assistance between them. Result Pass: Check 1 is true Fail: Check 1 is false
13.2 Access to relay services Where ICT systems support two-way communication and a set of relay services for such communication is specified, access to those relay services shall not be prevented for outgoing and incoming calls. NOTE 1: Two-way communication may include voice, real-time text, or video, singly or in combinations supported by both the relay service and the ICT system. NOTE 2: The purpose of this requirement is to achieve functionally equivalent communication access by persons with disabilities.	**C.13.2 Access to relay services** Type of assessment Inspection Pre-conditions 1. The ICT system supports two-way communication. 2. A set of relay services for two-way communication is specified. Procedure 1. Check that the system does not prevent access to those relay services for incoming and outgoing calls. Result Pass: Check 1 is true Fail: Check 1 is false
13.3 Access to emergency services Where ICT systems support two-way communication and a set of emergency services for such communication is specified, access to those emergency services shall not be prevented for outgoing and incoming calls.	**C.13.3 Access to emergency services** Type of assessment Inspection Pre-conditions 1. The ICT system supports two-way communication.

EN 301 549 clause	Determination of compliance
NOTE 1: Two-way communication may include voice, real-time text, or video, singly or in combinations supported by both the emergency service and the ICT system. NOTE 2: The purpose of this requirement is to achieve functionally equivalent communication access to the emergency service by persons with disabilities.	2. A set of emergency services for two-way communication is specified. Procedure 1. Check that the system does not prevent access to those emergency services for outgoing and incoming calls. Result Pass: Check 1 is true Fail: Check 1 is false

Annex - Tables and figures (from EN 301 549)

Table 5.1: Relationship between maximum design viewing distance and minimum character height at 0,7 degrees minimum subtended angle..

Maximum design viewing distance	Minimum character height
100 mm	1,2 mm
200 mm	2,4 mm
250 mm	3,1 mm
300 mm	3,7 mm
400 mm	4,3 mm
450 mm	4,9 mm
500 mm	5,5 mm
550 mm	6,7 mm
600 mm	7,3 mm

Figure 1: Relationship between minimum character height and maximum design viewing distance

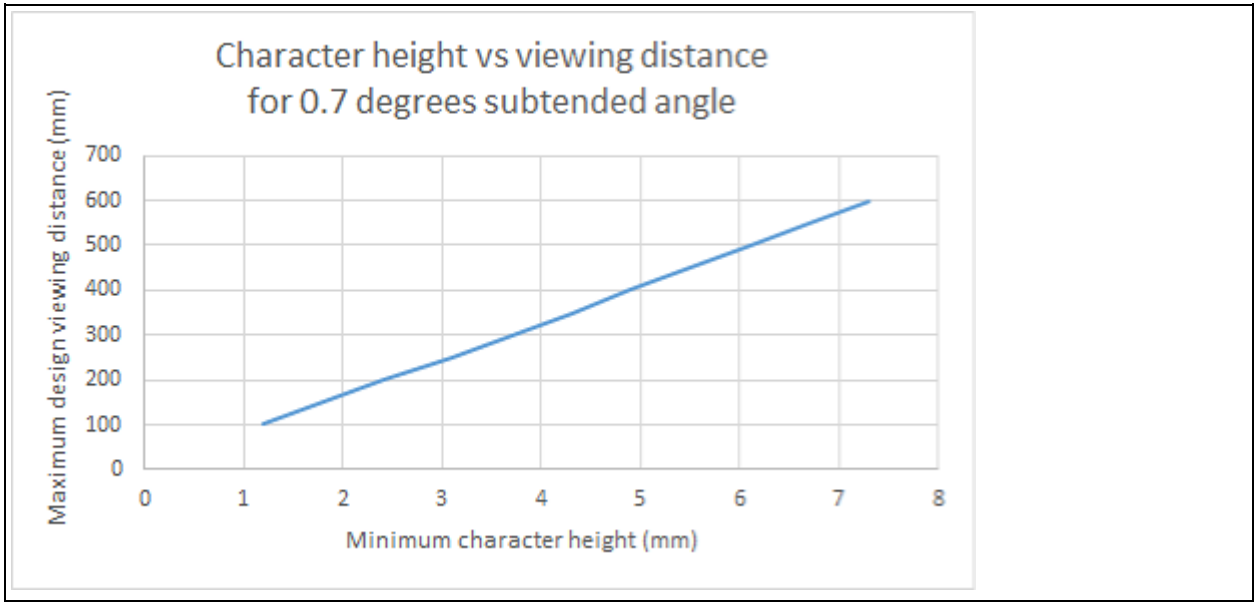


Figure 2: Vertical change in level

Figure 3: Bevelled change in level

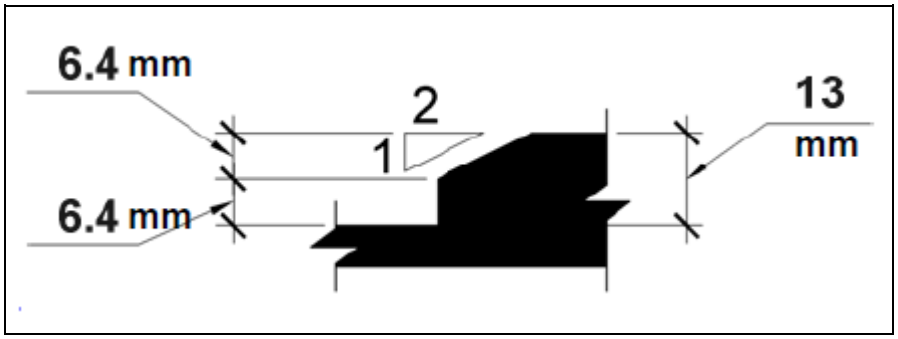


Figure 4: Clear floor or ground space

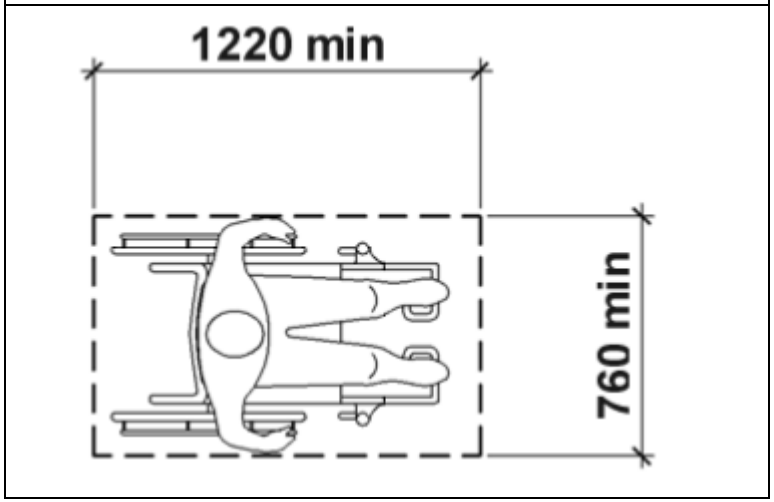


Figure 5: Manoeuvring Clearance in an Alcove, Forward Approach

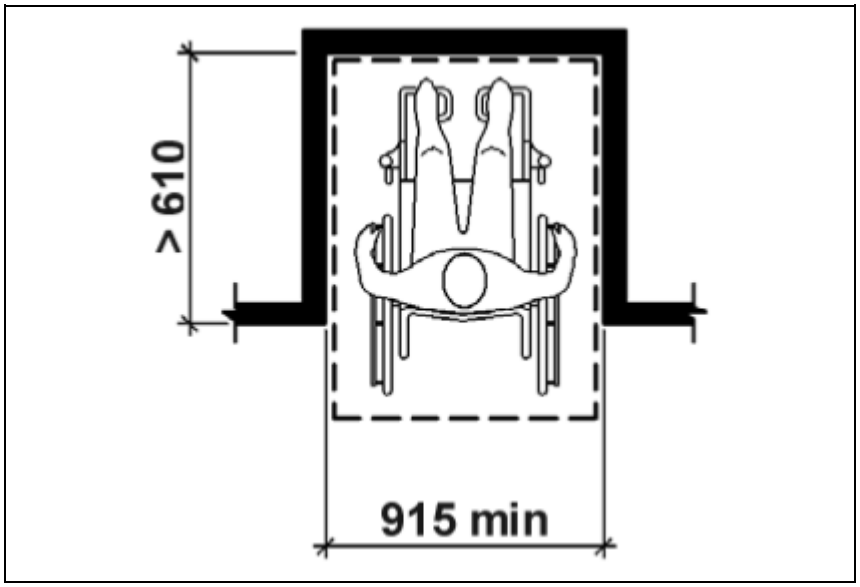


Figure 6: Manoeuvring Clearance in an Alcove, Parallel Approach

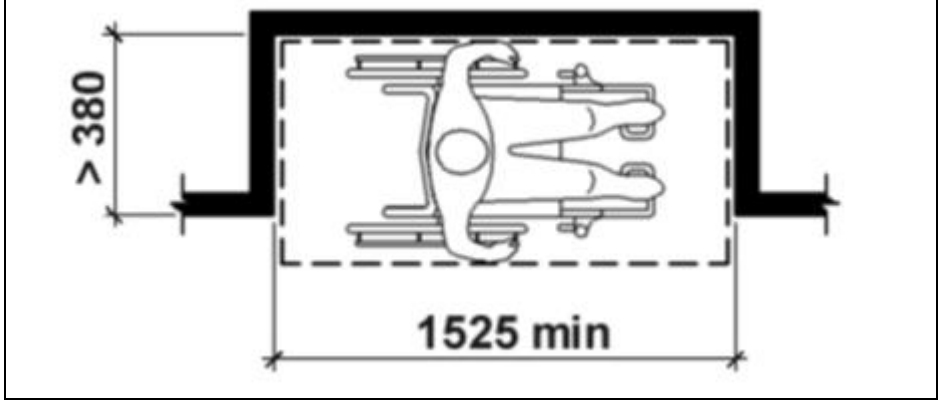


Figure 7: Toe clearance

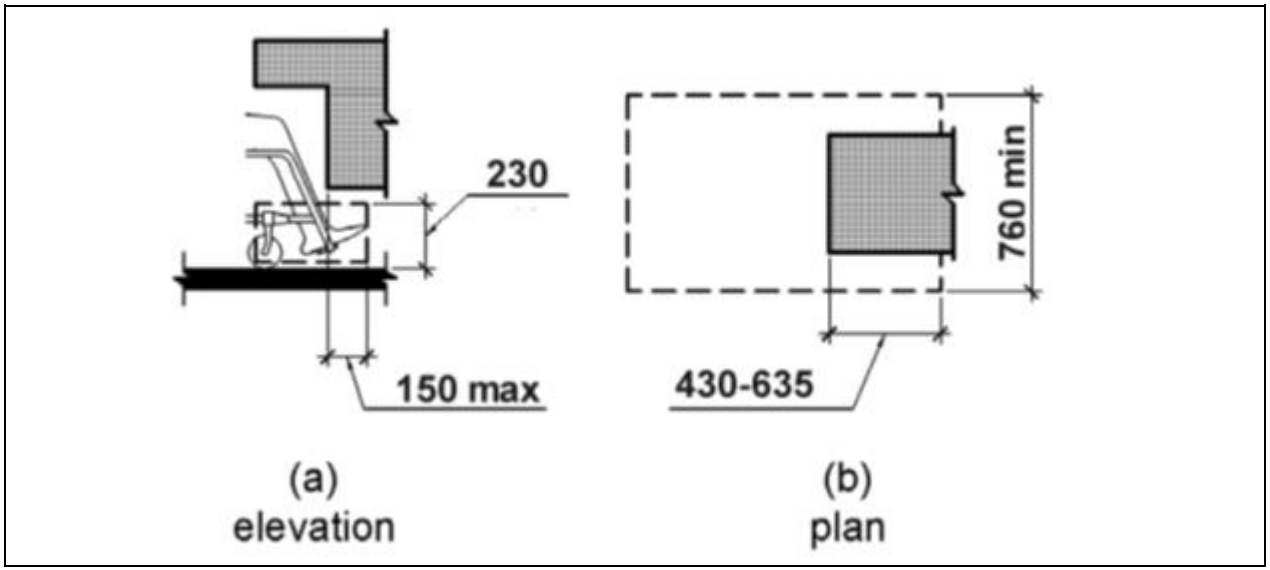


Figure 8: Knee clearance

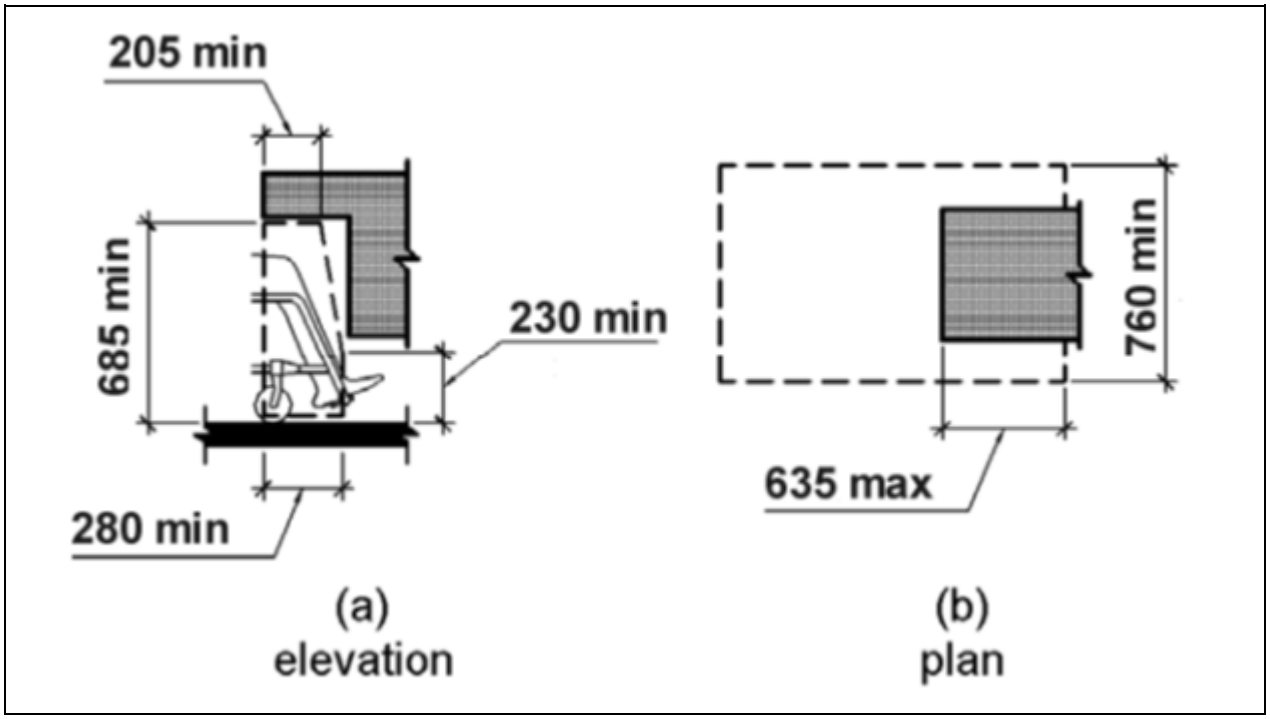


Figure 9: Unobstructed forward reach

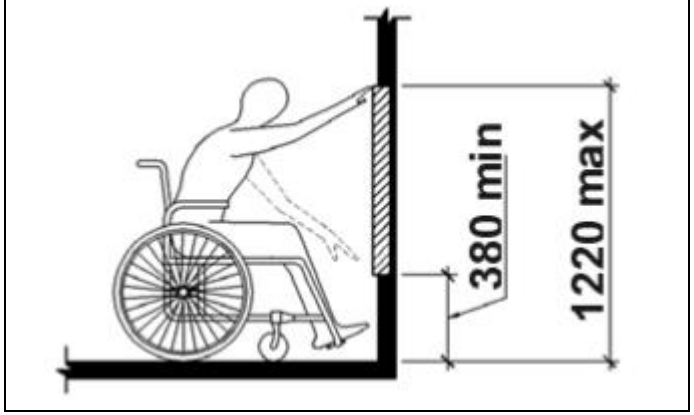


Figure 10: Obstructed high reach

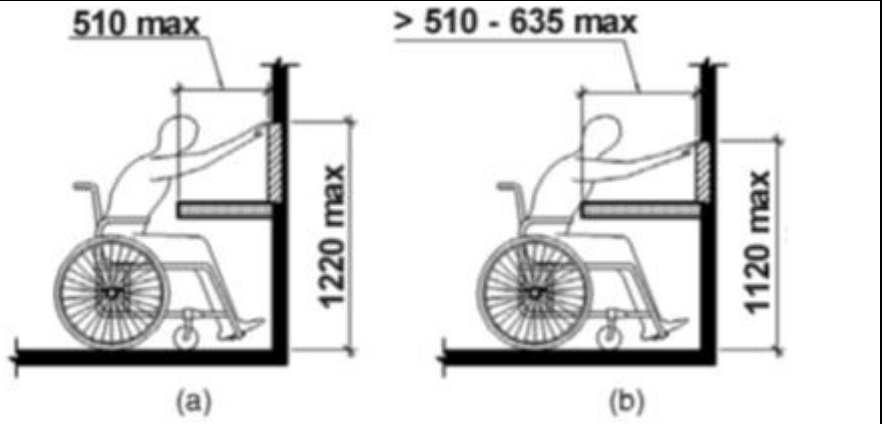


Figure 11: Unobstructed side reach

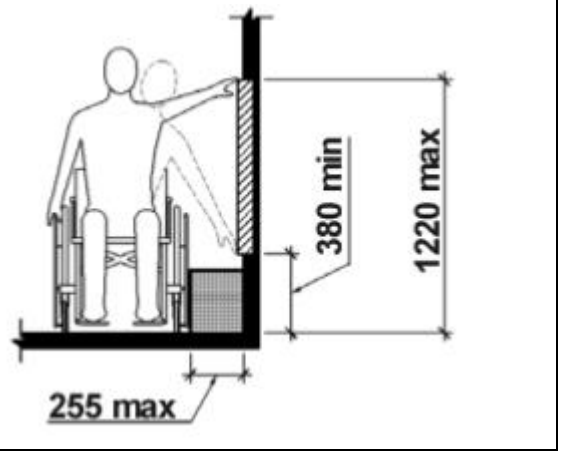
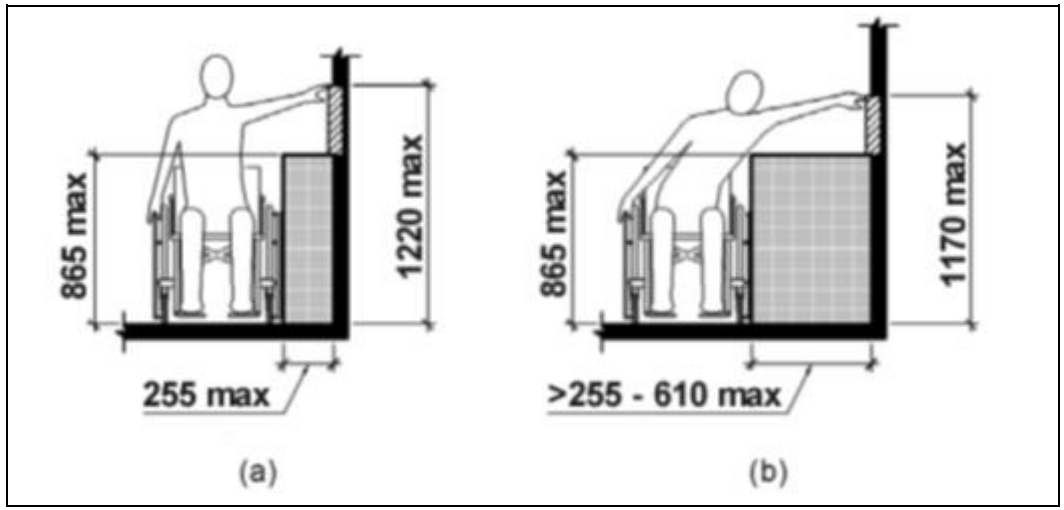


Figure 12: Obstructed high side reach


865 max
1220 max
255 max
(a)
865 max
1170 max
>255 - 610 max
(b)

Annex - References (from EN 301 549)

2.1 Normative references

References are specific, identified by date of publication and/or edition number or version number. Only the cited version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at ETSI References in docbox.

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

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

[1] 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 2008) /ISO/IEC 40500:2012: "Web Content Accessibility Guidelines (WCAG) 2.0".

- NOTE: Available at WCAG 2.0.

[5] W3C Proposed Recommendation (June 2018): "Web Content Accessibility Guidelines (WCAG) 2.1".

- NOTE: Available at WCAG 2.1.

2.2 Informative references

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

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

The following referenced documents 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 (2011): "American National Standard Method of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids".

[i.2] ANSI/TIA-4965: "Receive volume control requirements for digital and analogue wireline 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/ETSI 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/ETSI TR 101 551: "Guidelines on the use of accessibility award criteria suitable for publicly procured 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 134 229: "Universal Mobile Telecommunications System (UMTS); LTE; Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); User Equipment (UE) conformance specification (3GPP TS 34.229)".

[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 9241-11:1998: "Ergonomic requirements for office work with visual display terminals (VDTs) -- Part 11: Guidance on usability".

[i.16] ISO 9241-110:2006: "Ergonomics of human-system interaction -- Part 110: Dialogue principles".

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

[i.18] ISO 26800:2011: "Ergonomics - General approach, principles and concepts".

[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-A (2010): "Telecommunications; Telephone Terminal equipment; Handset magnetic measurement procedures and performance requirements".

[i.25] US Department of Justice: "2010 ADA Standards for Accessible Design".

[i.26] W3C Working Group Note 5 September 2013: "Guidance on Applying WCAG 2.0 to Non-Web Information and Communications Technologies (WCAG2ICT)".

- NOTE: Available at WCAG2ICT.

[i.27] Commission Implementing Decision 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] ETSI EN 301 549 (V1.1.2) (04-2015): "Accessibility requirements suitable for public procurement of ICT products and services in Europe".

[i.30] ETSI TR 101 552: "Guidance for the application of conformity assessment to accessibility requirements for public procurement of ICT products and services in Europe".

Annex - Definitions and abbreviations (from EN 301 549)

3.1 Definitions

For the purposes of the present document, the terms and definitions 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 characteristics and capabilities, to achieve a specified goal in a specified context of use (from ISO 26800 [i.18])

- NOTE 1: Context of use includes direct use or use supported by assistive technologies.
- NOTE 2: The context in which the ICT is used may affect its overall accessibility. This context could include other products and services with which the ICT may interact.

assistive technology: hardware or software added to or connected to a system that increases accessibility for an individual

- NOTE 1: Examples are Braille displays, screen readers, screen magnification software and eye tracking devices that are added to the ICT.
- NOTE 2: 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: additional audible narrative, interleaved with the dialogue, which describes the significant aspects of the visual content of audio-visual media that cannot be understood from the main soundtrack alone

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

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.

caption: synchronized visual and/or text alternative for both speech and non-speech audio information needed to understand the media content (after WCAG 2.1 [5])

- NOTE: This is also variously described using terms such as "subtitles" or variants such as "subtitles for the deaf and hard-of-hearing".

closed functionality : functionality that is limited by characteristics that prevent a user from attaching, installing or using assistive technology

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: users, tasks, equipment (hardware, software and materials), and the physical and social environments in which a product is used (from ISO 9241-11 [i.15])

open functionality: functionality that supports access by assistive technology

- NOTE: This is the opposite of Closed Functionality.

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

- NOTE: Operable parts can be provided in either hardware (see mechanically operable parts, above) or software. An on-screen button is an example of an operable part provided by software.

platform software : 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.

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 2.1 uses "determined" where this definition uses "able to be read" (to avoid ambiguity with the word "determined").

real-time text : form of a 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

satisfies a success criterion: success criterion does not evaluate to "false" when applied to the ICT (after WCAG 2.1 [5])

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.

user agent: software that retrieves and presents content for users (after WCAG 2.1 [5])

- 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 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.

web 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

web page: non-embedded resource obtained from a single URI using HTTP plus any other resources that are used in the rendering or intended to be rendered together with it by a user agent (after WCAG 2.1 [5])

3.2 Abbreviations

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

ADA Americans with Disabilities Act

ANSI American National Standards Institute

AT Assistive Technology

CIF Common Intermediate Format

CSS Cascading Style Sheets

DOM Document Object Model

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

IETF Internet Engineering Task Force

IMS IP Multimedia System

IP Internet Protocol

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

ODF Open Document Format

OOXML Office Open eXtensible Markup Language

PSTN Public Switched Telephone Network

QCIF Quarter Common Intermediate Format

RFC Request For Comment

RTT Real-Time Text

SC Success Criterion

SIP Session Initiation Protocol

URI Uniform Resource Identifier

USB Universal Serial Bus

VoIP Voice over IP

W3C World Wide Web Consortium

WCAG Web Content Accessibility Guidelines (of W3C)

XML eXtensible Markup Language

XUL XML User interface Language

Annex - Practical guidance for accessible non-web documentation

In WCAG “success criteria” are all technology agnostic. The requirements for non-web documents are based on the WCAG 2.1 level AA requirements, which means all level A and AA criteria relevant to documents must be met.

The W3C publishes sufficient techniques to meet WCAG success criteria, including techniques for non-web document formats such as PDF. Using a given technique is considered “sufficient” to meet the criteria relevant to the technique, but you can also meet the criteria in other ways.

Shared Services Canada has created a set of guides for producing accessible documents in Microsoft Office:

- How to create accessible documents

Various software vendors and organizations offer supplementary material that provides instructions for making documents accessible:

- Adobe PDF accessibility
- Accessible Digital Office Document (ADOD) Project
- Microsoft Accessibility Checker
- Webaim: Microsoft Word Techniques
- Webaim: PDF Techniques
- Canada.ca Content Style Guide
- Google Docs – Make your document or presentation accessible
- Web Accessibility Perspectives - Compilation of 10 Topics/Videos
- 18F Web Accessibility Guide
- University of Washington Accessible Document Guides

NOTE: Following the guidance given in the links above does not guarantee compliance with WCAG 2.1. Links are provided for reference only.