

Testability of 11.5.2.X requirements

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Brief story of this task...

- We started to work on these clauses in October, based on Gitlab issues
- On the 13th of December we shared the approach with the STF
- Now we are ready to make proposals for revising some of these clauses (11.5.2.x) and their corresponding procedures to determinate conformance (C.11.5.2.x)

Where is the work taking place?

- Several Gitlab issues, namely #60, #62, #63, #65
- Document in the shared space at onedrive. Under development

11.5.2.x requirements in a nutshell

- 11.5.2.3 requires that software makes use of the documented accessibility services.
- 11.5.2.5, 11.5.2.7, 11.5.2.10, 11.5.2.11, 11.5.2.13 require that different aspects of the UI elements can be programmatically determined by using documented accessibility services.
- 11.5.2.6, 11.5.2.8 and 11.5.2.9 require that the relationship among different UI elements can be programmatically determined by using documented accessibility services.
- 11.5.2.15 requires that assistive technologies are notified about changes in UI attributes referenced in requirements 11.5.2.5 to 11.5.2.11 and 11.5.2.13 by using documented accessibility services.
- 11.5.2.12, 11.5.2.14, 11.5.2.16, 11.5.2.17 require that the UI allows the programmatic execution of actions or modification of UI attributes can be made by using documented accessibility services.

Issues identified

- Testability issues in several clauses
- Consistency of the procedures of determination of conformance (C.11.5.2.X)
- What attributes should be considered when testing interoperability:
 - Text attributes (11.5.2.10)
- Correctness of the pass/fail conditions in C.11.5.2.X
- Revision of requirements 11.5.2.1 and 11.5.2.2 is not completed yet

C.11.5.2.5 to C.11.5.2.17 Discussion (first issue)

- C.11.5.2.5-C.11.5.2.17 do not include any step to check that the services described in 11.5.2.3 are being used.
- Proposal: add a section with instructions on what inspection tool to use.

C.11.5.2.5-C11.5.2.17 proposal (first issue)

Type of assessment

Inspection tool

1) Use the platform tool for accessibility inspection, 2) either if the latter is not available or isn't useful to test this requirement, use platform assistive technologies, 3) if the latter is not available, use available assistive technologies.

Pre-conditions

XXX

Procedure

XXX

Result

XXX

C.11.5.2.5 to C.11.5.2.17 Discussion (second issue)

- Novice users of the standard may not be familiar with concepts “platform tool” and “platform assistive technologies”. Thus, it is necessary to add an explanation about the platform tool.
- In Android the term “accessibility services” is used to name assistive technologies. Thus, we propose to acknowledge somewhere in standard the inconsistency.
- Proposal: to include 3 respective notes (first about "Platform tools", second about "Platform assistive technologies", and third about examples of AT's).

C.11.5.2.5-C11.5.2.17 proposal (second issue)

- Include NOTES in each clause:
 - NOTE: Platform tools are resources provided to ICT developers by the organization producing the platform. Some platform tools may include the function of inspecting the accessibility of ICTs developed for that platform. Some platform tools may be available to developers but not to 3rd party accessibility evaluators.
 - NOTE: Platform assistive technologies are assistive technologies that are part of the platform. In the context of the present clause, operating systems are popular examples of platform.
 - NOTE: Examples of assistive technologies (either platform or non-platform) to test the present clause are, but not limited to, screen reader and voice control.

11.5.2.3 Use of accessibility services (current)

Where the software provides a user interface it shall use the applicable documented platform accessibility services. If the documented platform 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.

11.5.2.3 Discussion

- Values of 11.5.2.3:
 - Its spirit: "applications must use the platform accessibility services or other platform documented services".
 - Requirements 11.5.2.5 to 17 make use of its definition of "use of accessibility services"
- Issues:
 - some evaluators do not understand the purpose of 11.5.2.3 or how to assess compliance.

11.5.2.3 Modification proposal

1. Omitting requirement 11.5.2.3 from the Annexes ZA, ZB, etc.
 - In a practical sense, EN 301 549 doesn't undermine the 11.5.2.3 requirement if it isn't included in the respective annexes.
 2. Keeping 11.5.2.3 in annexes ZA, ZB, and adding notes to the respective requirements and procedures of determination of conformance that clarify the situation for those using the standard.
 - It is necessary to avoid current confusion around the 11.5.2.3 requirement.
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- **Our preferred option is #1**

C.11.5.2.3 (current)

Procedure

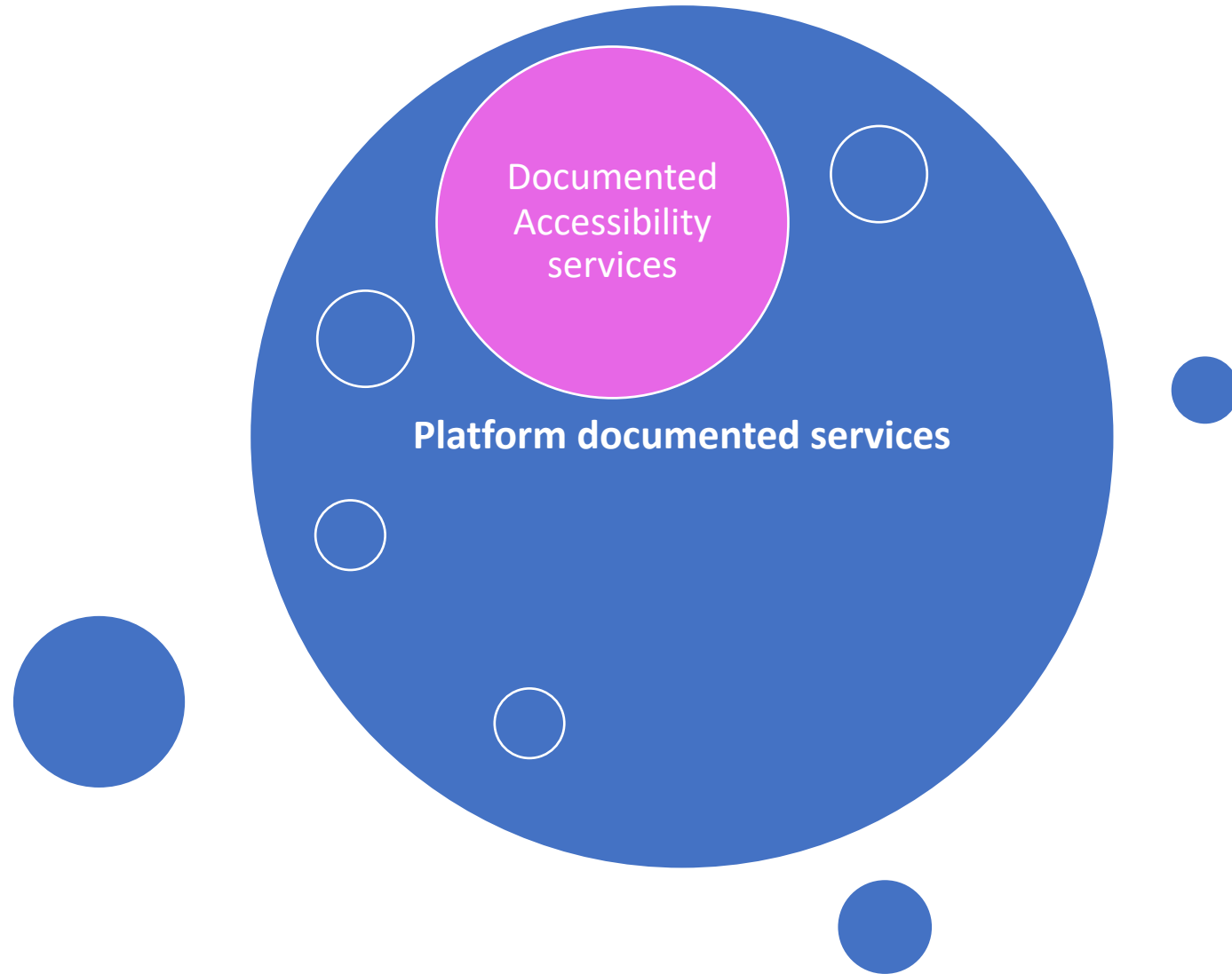
1. Check that the software uses the applicable documented platform accessibility services.
2. Check that the software can meet the applicable requirements 11.5.2.5 to 11.5.2.17 whilst using the documented platform accessibility services.
3. Check that the software can meet requirements 11.5.2.5 to 11.5.2.17 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

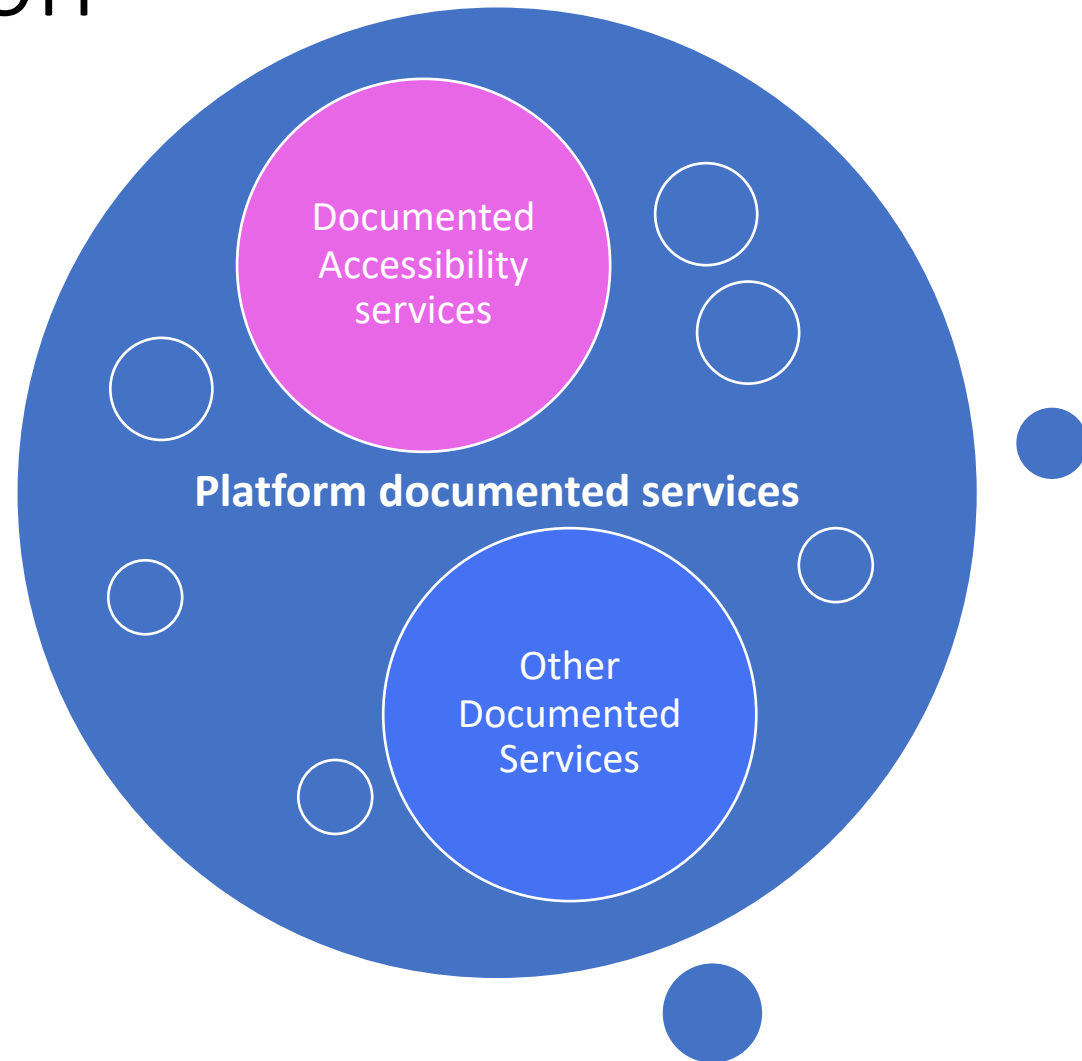
C.11.5.2.3 Discussion



C.11.5.2.3 Discussion

From 11.5.2.3

“If the documented platform 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”



C.11.5.2.3 Discussion

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

C.11.5.2.3 Discussion

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

Testability of Check 1 is an open issue

C.11.5.2.3 Discussion

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

Testability of Check 1 is an open issue

Check 2 is true implies Check 1 is true

C.11.5.2.3 Modification proposal

Procedure

1. 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.
2. Check that the software can meet requirements 11.5.2.5 to 11.5.2.17 whilst using other platform documented services.

Result

Pass: Check 1 is true or check 2 is true

Fail: Check 1 is false and check 2 is false

11.5.2.10 Text (current)

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.

11.5.2.10 Discussion about text attributes

In addition to text content and boundaries, what attributes to check?

- Whether the text is editable by the user or not.
- Point of insertion for user's edition of text.
- Language of text for output **and** input text (e.g. screen reader's pronunciation, glossary support for people with intellectual impairments).
- Text structures: (un)ordered lists, position of the text item in the list.
- Existence of capital letters, emphasized text.
- Any proposals? C.11.5.2.10 should be updated accordingly

11.5.2.11 List of available actions (current)

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.11.5.2.11 (current)

Type of assessment

Inspection

Preconditions

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

Not applicable: Pre-condition 1 or 2 is not met.

C.11.5.2.11 Discussion

Type of assessment

Inspection

Preconditions

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

Not applicable: Pre-condition 1 or 2 is not met.

C.11.5.2.11 compared with C.11.5.2.13

Type of assessment

Inspection and testing

Preconditions

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.
4. As a user, use the text editing functionality in the evaluated software product.
5. Check that the tracking of focus, text insertion point and selection attributes work.

Result

Pass: Checks 2 and 5 are true

Fail: Check 1 or 5 is false

Not applicable: Pre-condition 1 or 2 is not met.

C.11.5.2.11 Modification proposal

Type of assessment

Inspection

Preconditions

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 2 is true

Fail: Check 2 is false

Not applicable: Pre-condition 1 or 2 is not met.

C.11.5.2.13 (current)

Type of assessment

Inspection and testing

Preconditions

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.
4. As a user, use the text editing functionality in the evaluated software product.
5. Check that the tracking of focus, text insertion point and selection attributes work.

Result

Pass: Checks 2 and 5 are true

Fail: Check 1 or 5 is false

Not applicable: Pre-condition 1 or 2 is not met.

C.11.5.2.13 Discussion

Type of assessment

Inspection and testing

Preconditions

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.
4. As a user, use the text editing functionality in the evaluated software product.
5. Check that the tracking of focus, text insertion point and selection attributes work.

Result

Pass: Checks 2 and 5 are true

Fail: Check 1 or 5 is false

Not applicable: Pre-condition 1 or 2 is not met.

C.11.5.2.13 Modification proposal

Type of assessment

Inspection and testing

Preconditions

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.
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 2 or 5 is false

Not applicable: Pre-condition 1 or 2 is not met.