

Proposed: Tree Based Conformance Approach

***Replaced by Structure Example 3 June 2024

Overview

- Guidelines are very high level
- Outcomes have an AND between them
- Required Methods within a level have an OR between them
- Assertions are under an Outcome, inside or next to the decision tree.
- Best Practice Methods (Optional), also have an AND between them
- Some Methods may have both a Required and Best Practice level within them.
- Tests would have AND and would be the

Options for determining level:

- Bronze = All Required Methods, Silver = Bronze + x% of Best Practices and Assertions, Gold = (x+y)% of Best Practices and Assertions
- Bronze = All Required Methods, Silver = Bronze + x% of Best Practices, Gold = Bronze + x% of Best Practices and Assertions
- Possible addition would be future looking outcomes or methods to that capture needs that are not yet fully available. If these were added, they could be part of the Gold level and we could use the work Gregg and Cybele did on migrating outcomes from future looking to best practice to required.
- Only two levels: Baseline and Best Practice?

Questions for Discussion

1. How will scoping work. Using text alternatives as an example.
 - **Scope – Aggregate:** If one important image out of 8,000,000 images doesn't have alt text, does the outcome fail? If not, how many/percentage images before the outcome fails? Does the type of image missing a text alternative impact scoring? For example: how many medium images with no text alternative or decorative images without a null alternative does it take to fail an outcome vs. how many important images with no text alternative?
 - **Scope – Task:** How is the task defined and whether the image is important to the task? How many/percentage images can fail? Same priority issues as above.
 - **Scope – View (page):** What is the view? How many changes of the view before it becomes a different view? Does the size of change matter? For example: does changing a tab in a tab widget change the view? Would the answer to this change if the tab panels had / didn't have images in?
 - **Scope – Component:** How does this apply to the image? Navigation icons, certainly. A graph or chart, not really.

Generic Structure

Guideline (Normative)

-
- Outcome (Normative)
 - Decision Tree (Normative)
Question
 - If X,
 - Required Method (Informative)
 - Tests (Informative)
 - Required Method with Best Practice
 - Tests
 - Best Practice Method
 - Tests
 - Assertion (Informative)
 - If Y,
 - Required Method
 - Tests
 - Best Practice Method
 - Tests
 - Assertion (Informative)

Guideline: Text Alternatives - Visual content has equivalent text alternatives

Outcome: Images have equivalent text alternatives

@@@ Alastair - tidy up, create method page, link to it.

Test Procedure

The test procedure for each method is the same, although it could be simplified for decorative images.

1. Remove, hide, or mask the image.
2. Replace it with the text alternative.
3. Check that the meaning is substantively equivalent
 - a. the purpose of the non-text content is met by the text alternative.
 - b. The way the content is presented is using the most appropriate, accessibility-supported (math, code samples, etc.)
4. If the non-text content contains words that are important to understanding the content, the words are included in the text alternative.

5. If the non-text content duplicates adjacent text, the alternative *may* be null.

Methods

For each image:

- Would removing the image impact how people understand the page?
 - **No (Purely decorative):** Removing the image would not impact how people understand the page. The image provides no information.
 - For purely decorative images:
 - **Method (Silver / best-practice):** The image is hidden from assistive technology.
 - (HTML, EPUB) Using `alt` attributes so the image is ignored.
 - (PDF) Using 'artifact' elements so the image is ignored.
 - (iOS) Using `isAccessibilityElement` so the image is ignored.
 - (Android) Using `importantForAccessibility` so the image is ignored.
 - **Yes:** Can a concise and plain-text description provide an equivalent to the image?
 - **No (Complex images):** A brief identification is included as part of the image, and a detailed alternative is provided.
 - **Method (Bronze / Baseline):** Include text that provides equivalent information near the image.
 - (All platforms) Include text that provides equivalent information in a show/hide element near the image.
 - (All platforms) Include structured text information that provides equivalent information for the image.
 - (? platforms) Relying on user-agents to describe the image *[future method? And requires "accessibility supported"]*.
 - (All platforms) For artistic content (where the image conveys a aesthetic or emotional content that has no equivalent), include text that provides descriptive information near the image.
 - **Assertion (Silver / best-practice):** Usability testing is conducted to assess the quality of the alt-text and the results are used to improve the alt-text.

- **Yes** (a concise and plain-text description can provide an equivalent):
 - The image part of a control. Is the name of the control sufficient to describe the image?
 - **No:** The image requires a description:
 - **Method (Bronze):** A text-alternative is associated with the image
 - (HTML) The author marks which images are important *[future method]*.
 - (All platforms) Include visible text that provides equivalent information to each image.
 - (?- platforms) Relying on user-agents to describe images *[future method? And requires “accessibility supported”]*.
 - (HTML, ePub, PDF) Using `alt` attributes to describe images.
 - (iOS) Using `accessibilityLabel` to describe images.
 - (Android) Using `contentDescription` to describe images.
 - (VR platform X) Using X attribute to describe images.
 - **Yes:** The image can be coded so it is ignored by assistive technology
 - **Method (Bronze / Baseline):**
 - (HTML, EPUB) Using `alt` attributes so the image is ignored.
 - (PDF) Using ‘artifact’ elements so the image is ignored.
 - The image is not part of a control, the image requires a description:
 - **Method (Bronze / Baseline):** A text-alternative is programmatically associated with the image
 - (HTML) The author marks which images are important *[future method]*.
 - (All platforms) Include visible text that provides equivalent information to each image.
 - (?- platforms) Relying on user-agents to describe images *[future method? And requires “accessibility supported”]*.

- (HTML, ePub, PDF) Using `alt` attributes to describe images.
 - (iOS) Using `accessibilityLabel` to describe images.
 - (Android) Using `contentDescription` to describe images.
 - (VR platform X) Using X attribute to describe images.
- If no (e.g. provided for exploration): Additional detail is included, such as an alternative method of exploring the information.
 - **Method:** (All platforms) Include text that provides equivalent information to each image in a show/hide element near each image.
 - **Method:** (All platforms) Include structured text information that provides equivalent information for each image.
 - **Method:** (All platforms) When multiple controls with images that have a relationship: include text providing information about the relationship with the main image, the main image's text alternative is encountered first in the readable order.
- Are there multiple images which are all views of one object?
 - If yes: text is included to provide information about the relationship with the main image, and the main image's text alternative is encountered first in the readable order.
 - **Method:** TBC:

Editor's note: There are draft branches for “Images where the author does not know the content in advance” and “Images where the platform provides alt-text by default (e.g. emojis)”. However, these need further investigation before inclusion.

Aggregate / Product Assertions / Best practice

- Text alternatives follow an organizational style guide.
 - Test: The organization has a documented style guide which includes guidance on text-alternatives, and a policy that editors are required to follow the style guide. The style guide covers each type of image in the “Types of Image” section, and provides guidance and examples for authors to follow in their context.
- Text alternatives across an aggregate/product are subject to a quality process to provide a reasonable confidence that each image will meet the bronze level requirements.

- Test: TBC

Definitions

- **“Image”** - “a visual representation of something” (this is the dictionary definition, if we use this, it doesn’t need to be a defined term).
- **“equivalent to the image”** - text or audio which serves an equivalent purpose to what presenting the image achieves. Where text is embedded in an image that text is included in the equivalent unless it is incidental text from a photo (e.g. a street sign in a photo of a town).
- **“Decorative image”** - serving only an aesthetic purpose, providing no information, and having no functionality (If removed, would not affect the meaning or function of the page.)
- **“Complex image”** - an image which requires more than one or two sentences of plain text to describe the contents.
- **Text** - “a sequence of characters that can be programmatically determined, where the sequence is expressing something in human language.”

Focus/Pointer Visible - The *point of interaction* (including focus and pointer) must be visually indicated

Outcome

The keyboard focus must be visually indicated

Updated Tree 24th May 2024

Test Procedure

Requirements for all indicators for keyboard-focusable elements that is included under each method:

- **Exist:** There is a visible keyboard focus indicator.
- **Not be obscured:** The focus indicator is not obscured or partially obscured (more than 50%, TBC)
- **Be persistent:** The focus indicator is persistent while the element has focus.
- **Unfocused:** The focus indicator does not persist after the element loses focus.
- **Distinct Style:** The keyboard focus indicator uses a style that is distinct from the style of other controls, so that the item in focus can be distinguished without reference to the non-focused state.

@@@ To do: Re-structure into the tree / bullets, with the test-procedure as the common set.

1 Default (the user-agent default focus indicator is used)

If the focus indicator is provided by the user-agent:

- Author Method (HTML, EPUB): Don't block the default user agent indicator and ensure that default indicator is present.
- Platform Method: Provide a focus indicator that meets the requirements for all focus indicators and bounding box indicators.

2 Line / bounding box indicators

If the authored focus indicator uses a line or bounding box.

Author Method (HTML): Use bounding box indicator

Author Method (HTML): Single line indicator

Tests/requirements within the method:

- **Sufficient Size:** The thickness of the focus indicator change is sufficient to be noticeable (metric TBC)
- **Change of contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient in a) standard mode, b) dark mode, and c) high contrast mode.
- **Adjacent Contrast:** The focus indicator has sufficient contrast with the adjacent colors in a) standard mode, b) dark mode, and c) high contrast mode
 - Note: There is a relationship between the area of the focus indicator and contrast that will need to be clarified
- **Distinct Style:** The keyboard focus indicator uses a style that is distinct from the style of other controls, so that the item in focus can be distinguished without reference to the non-focused state.
- **Adjacent:** The indicator is closer to the focused element than any other focusable element.

3 Background color

If the authored focus indicator uses a change of color within the control:

- Author Method (HTML): Change the user-interface-component background by [some minimum amount]
- Author Method (HTML): Change the user-interface-component border color by [some minimum amount]

Tests/requirements within the methods:

- **Sufficient Size:** The area of the focus indicator change is sufficient to be noticeable [metric TBC]
- **Contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient [metric TBC] in a) standard mode, b) dark mode, and c) high contrast mode
- **Distinct Style:** The keyboard focus indicator uses a style that is distinct from the style of other controls, so that the item in focus can be distinguished without reference to the non-focused state.

4 Icon/shape

If the authored focus indicator uses the addition/removal of a an icon or shape:

- **Author method (HTML):** Provide an icon to indicate the user interface component with focus
- **Author method (HTML):** Provide a shape to indicate the user interface component with focus

Tests/requirements within the methods:

- **Sufficient Size:** The area of the focus indicator change is sufficient to be noticeable [metric TBC]
- **Contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient [metric TBC] in a) standard mode, b) dark mode, and c) high contrast mode
- **Adjacent Contrast:** The focus indicator has sufficient contrast with the adjacent colors [metric TBC] in a) standard mode, b) dark mode, and c) high contrast mode

■ Note: There is a relationship between the area of the focus indicator and contrast that will need to be clarified

5 Tooltip/additional content

If the authored focus indicator uses additional content:

- **Author method (HTML):** Display a tooltip to indicate the user interface component with focus

Tests/requirements within the methods:

- **Sufficient Size:** The area of the focus indicator change is sufficient to be noticeable
- **Contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient in a) standard mode, b) dark mode, and c) high contrast mode

- **Adjacent Contrast:** The focus indicator has sufficient contrast with the adjacent colors in a) standard mode, b) dark mode, and c) high contrast mode
 - Note: There is a relationship between the area of the focus indicator and contrast that will need to be clarified
- **Adjacent:** The indicator is sufficiently adjacent to the element that has focus that there is no ambiguity which element has focus

6 If size change

If the authored focus indicator uses a change of size of the focusable element:

- **Author method:** Increase the size of the user interface component to indicate focus

Tests/requirements within the methods:

- **Sufficient Size:** The area of the focus indicator change is sufficient to be noticeable
- **Contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient in a) standard mode, b) dark mode, and c) high contrast mode
- **Adjacent Contrast:** The focus indicator has sufficient contrast with the adjacent colors in a) standard mode, b) dark mode, and c) high contrast mode
 - Note: There is a relationship between the area of the focus indicator and contrast that will need to be clarified
- **Adjacent:** The indicator is sufficiently adjacent to the element that has focus that there is no ambiguity which element has focus

7 Combination indicator:

- Pick a method and conform using that method.

Guideline: [Changes Of Natural Language](#)

Outcome: The natural language of content is programmatically indicated.

User Need: Specifying both the natural language of the view's main content as well as any changes in language of blocks of content in that view can help:

- People who use screen readers or other technologies that convert text into synthetic speech;
- People who use braille that need the correct tables to be applied to text; and

- People with certain cognitive, language, and learning disabilities who use text-to-speech software.

For each product:

- **Does the product include more than one natural language?**
 - **No**, The product has the same natural language throughout.
 - i. **Method:** The natural language is programmatically indicated at the broadest scope possible
 1. (HTML) The lang attribute indicates the natural language of the text for each page.
 - a. Test: the view has a language attribute on the <html> element.
 - b. Test: the view language attribute has a valid ISO value.
 - c. Test: the view language attribute is correct for the natural language of the page.
 2. (PDF) The Lang entry in the document catalog dictionary indicates the natural language of the document's text.
 - a. Test: the Lang entry specifies the correct natural language for the document.
 - b. Test: the document catalog dictionary has a non-empty value.
 3. (Mobile App) The application has the correct natural language set.
 - **Yes:** The product has multiple languages.
 - i. **Method:** The natural language used in the majority of content is programmatically indicated at the broadest scope possible AND changes of language are programmatically indicated at the broadest scope possible for the change.
 1. (HTML)
 - a. Test: the change of language has a language attribute.
 - b. Test: the change of language has a valid ISO value.
 - c. Test: the change of language attribute value is correct for the language.
 - d. Test: proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text aren't marked up as a change of language
 2. (PDF): changes of language are marked up with the correct string type in PDFDocEncoding
 - a. Test: the Lang entry specifies the correct change of natural language for the content that is in a different language to the natural language of the page.

Guideline: [Clear Language 2023 \(Jeanne\)](#)

User Need: As a user with a language, processing, or memory impairment, I need the language used to be clear and easy for me to understand.

Outcome: Common words are used, and any uncommon words are explained.

Does your product use a core vocabulary list?

Yes, Test against list and define any terms not on list (list can be common or context specific)

No, Conduct plain language review and replace or define terms identified as an issue (Assertion)

1. Does your product use words from a **core vocabulary list** (X,000 most common words/phrases in language/dialect) that the product has chosen to set as a standard for itself
 - a. Examples in English (lists will vary from language to language)
 - 1,000 most common:
<https://gonaturalenglish.com/1000-most-common-words-in-the-english-language/>
 - 3,000 most common:
<https://basicsenglishspeaking.com/3000-most-common-words/>
 - 5,000 most common:
https://www.wordfrequency.info/samples/lemmas_60k.txt
 - 10,000 most common
<https://www.mit.edu/~ecprice/wordlist.10000>
 - **Yes**, a core vocabulary list is used
 - Method: The content is written using a selected core common word vocabulary.
 - **No**, Does the product use context-specific vocabulary (ex: surgeons)?
 - **Yes**
 - **Method:** Make available (via metadata, accessibility statement, or elsewhere) a link to a list of context-specific vocabulary that the site considers common among its target audience?
 - Example:
 - Common accounting terms used on an accounting site
 - Internal wiki
 - Dictionary
 - No, the site uses words that aren't on a common or
2. Does the site use any words that aren't in a self-selected core vocabulary list

- If so, does the site provide a definition by one of these methods:
 - Inline definition
 - One-click to a glossary
 - Pop-up glossary
- 3. Does the site not use a core vocabulary list
 - **Assertion:** A plain language review was conducted and changes were implemented.
 - All complicated words identified by the plain language review were replaced with common words or a definition was provided.

Guideline: A consistent visual and programmatic design is used across the product (Chuck)

Outcome

Navigation elements remain consistent across views within the product.

User need

As a person who needs more effort to learn the navigation in a website or app, I want my learning on one screen to apply to other screens in the same 'section' of a site or app.

Methods

Consider each view against a sample of other views within the product.

Method: Common navigation elements used across each view are the same in terms of position, style and programming throughout the product or functional section of the product. Examples of a functional section include:

- Providing a cleaner interface when the user is completing a defined process, or
- Adding section level navigation that is unnecessary in other parts of the product.

Method: A "skip navigation" (or "skip to main content") link is included as the first link on every page in a Web site. The link allows users to quickly bypass heading information and common navigation and begin interacting with the main content of a page." [WCAG 3.2.3](#)

Rachael messing with next iteration (old)

Guideline: Text Alternatives - Visual content has equivalent text alternatives

Outcome: Images have equivalent text alternatives

Methods

For each image:

Would removing the image impact how people understand the page?

- **No, removing the image has no impact.**
 - **Method: Purely decorative image**
 - **What:** Hide decorative images
 - **When:** Removing the image would not impact how people understand the page. The image is meaningless and provides absolutely no information.
 - **How:**
 - (HTML, ePub) Using alt attributes to set each image to be ignored.
 - (PDF) Using 'artifact' elements to set each image to be ignored.
 - (iOS) Using isAccessibilityElement to set each image to be ignored.
- **Yes, removing the image impacts how people understand the page.**
 - Does the content creator know the purpose of the image in advance?
 - Yes, the content creator knows the purpose of the image in advance
 - Can a concise and plain-text description provide an equivalent to the image?
 - **Yes, image can be described with a concise and plain-text description**
 - How is the image used?
 - **Method: Image is not decorative and part of control**
 - **What:** Provide a concise text alternative that describes function or images part in function
 - **When:** When an image is not decorative and is part of or the entire control.
 - **How:**
 - (HTML) The author marks which images are important *[future method]*.

- (All platforms) Include visible text that provides equivalent information to each image.
- (All platforms) Relying on user-agents to describe images *[future method? And requires “accessibility supported”]*.
- (HTML, ePub, PDF) Using `alt` attributes to describe images.
- (iOS) Using `accessibilityLabel` to describe images.
- (Android) Using `contentDescription` to describe images.
- (VR platform X) Using X attribute to describe images.

■ **Method: Image contains text that is equivalent to the image's meaning**

- **What:**
- **When:**
- **How:**

- (All platforms) The visible text is included in the alternative, unless it is incidental text from a photo (e.g. a street sign in a photo of a town).
- **Method:** (HTML) The author marks which images are important *[future method]*.
OR
- (All platforms) Include visible text that provides equivalent information to each image.
- (All platforms) Relying on user-agents to describe images *[future method? And requires “accessibility supported”]*.
- (HTML, ePub, PDF) Using `alt` attributes to describe images.
- (iOS) Using `accessibilityLabel` to describe images.

- (Android) Using `contentDescription` to describe images.
 - (VR platform X) Using X attribute to describe images.
- **Method: Text-alternative provided by the platform (e.g. emoji)**
 - What:
 - When:
 - How:
- Are there multiple images which are all views of one object?
 - If yes: text is included to provide information about the relationship with the main image, and the main image's text alternative is encountered first in the readable order.
 - **Method:** TBC:

- If the

If no (e.g. provided for exploration): Additional detail is included, such as an alternative method of exploring the information.

- **Method:** (All platforms) Include text that provides equivalent information to each image in a show/hide element near each image.
- **Method:** (All platforms) Include structured text information that provides equivalent information for each image.
- **Method:** (All platforms) When multiple controls with images that have a relationship: include text providing information about the relationship with the main image, the main image's text alternative is encountered first in the readable order.

■ No

- **Method: Image with Complicated Description**
 - **What:** Provide a brief description as part of the image, and a detailed alternative.
 - **When:** The image description is longer than [some set maximum]
 - **How:**
 - (HTML, ePub, PDF) Using `alt` attributes to describe images.
 - (All platforms) Include text that provides equivalent information to each image in a show/hide element near each image.
 - (All platforms) Include structured text information that provides equivalent information for each image.
 - (All platforms) Link to document that describes content within image

Focus/Pointer Visible - The *point of interaction* (including focus and pointer) must be visually indicated

Outcome

The keyboard focus must be visually indicated

-

Updated Tree 20 May 2024

All focus indicators

- The default indicator is not hidden/disabled/overridden
- **Not obscured:** The focus indicator is not obscured or partially obscured (more than 50%?)
- **Persistent:** The focus indicator is persistent while the element has focus.
- **Unfocused:** The focus indicator does not persist after the element loses focus.
- **Distinct Style:** The keyboard focus indicator uses a style that is distinct from the style of other controls, so that the item in focus can be distinguished without reference to the non-focused state.

If default (Is the default focus indicator used?)

- Author Method: Don't block the default user agent indicator and ensure that default indicator is present
- Platform Method: Provide a focus indicator that meets the requirements for all focus indicators and bounding box indicators.

If line / bounding box (Is the focus indicator using a line?)

Author Method: Use bounding box indicator

Author Method: Single line indicator

Tests/requirements:

- **Sufficient Size:** The thickness of the focus indicator change is sufficient to be noticeable
- **Change of contrast:** The contrast change of the pixels that indicate the

keyboard focus is sufficient in a) standard mode, b) dark mode, and c) high contrast mode

- **Adjacent Contrast:** The focus indicator has sufficient contrast with the adjacent colors in a) standard mode, b) dark mode, and c) high contrast mode
 - Note: There is a relationship between the area of the focus indicator and contrast that will need to be clarified
- **Distinct Style:** The keyboard focus indicator uses a style that is distinct from the style of other controls, so that the item in focus can be distinguished without reference to the non-focused state.
- **Adjacent:** The indicator is closer to the focused element than any other focusable element.

Possible additions:

- The line is thick enough to be visible by meeting some minimum, at least 2 pixels.

If color (Is the indicator using a change of color within the control?)

Author Method: Change the user-interface-component background by [some minimum amount]

Author Method: Change the user-interface-component border color by [some minimum amount]

- **Sufficient Size:** The area of the focus indicator change is sufficient to be noticeable
- **Contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient in a) standard mode, b) dark mode, and c) high contrast mode
- **Distinct Style:** The keyboard focus indicator uses a style that is distinct from the style of other controls, so that the item in focus can be distinguished without reference to the non-focused state.

Possible additions

- The area of the control that changes is at least 50% of the size of the control.

If icon/shape (Is the indicator using an icon or shape?)

Author method: Provide an icon to indicate the user interface component with focus

Author method: Provide a shape to indicate the user interface component with focus

- **Sufficient Size:** The area of the focus indicator change is sufficient to be noticeable
- **Contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient in a) standard mode, b) dark mode, and c) high contrast mode
- **Adjacent Contrast:** The focus indicator has sufficient contrast with the adjacent colors in a) standard mode, b) dark mode, and c) high contrast mode
 - Note: There is a relationship between the area of the focus indicator and contrast that will need to be clarified

If Tooltip/additional content (Is the indicator using additional content?)

Author method: Display a tooltip to indicate the user interface component with focus

- **Sufficient Size:** The area of the focus indicator change is sufficient to be noticeable
- **Contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient in a) standard mode, b) dark mode, and c) high contrast mode
- **Adjacent Contrast:** The focus indicator has sufficient contrast with the adjacent colors in a) standard mode, b) dark mode, and c) high contrast mode
 - Note: There is a relationship between the area of the focus indicator and contrast that will need to be clarified
- **Adjacent:** The indicator is sufficiently adjacent to the element that has focus that there is no ambiguity which element has focus

If size change (Is the indicator using a change of size?)

Author method: Increase the size of the user interface component

- **Sufficient Size:** The area of the focus indicator change is sufficient to be noticeable
- **Contrast:** The contrast change of the pixels that indicate the keyboard focus is sufficient in a) standard mode, b) dark mode, and c) high contrast mode
- **Adjacent Contrast:** The focus indicator has sufficient contrast with the adjacent colors in a) standard mode, b) dark mode, and c) high contrast mode
 - Note: There is a relationship between the area of the focus indicator and contrast that will need to be clarified
- **Adjacent:** The indicator is sufficiently adjacent to the element that has focus that there is no ambiguity which element has focus

If Combination:

- Pick a method and conform using that method.