

# Aoj.am WCAG 2.1 Requirements

Web Content Accessibility Guidelines (WCAG) 2.1 is a set of guidelines created by the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C). These guidelines provide a framework for making web content more accessible to people with disabilities, ensuring that websites and web applications can be used effectively by individuals with various disabilities, including visual, auditory, cognitive, and motor impairments. Documentation for the WCAG 2.1 standard can be viewed here: <https://www.w3.org/TR/WCAG21/>.

Violations, warnings, and manual checks are terms commonly used when evaluating the accessibility of a website or digital content according to the Web Content Accessibility Guidelines, and relate to the process of assessing whether a website meets the accessibility criteria outlined in WCAG 2.1 or other versions.

- **Violations:** These are instances where a website or digital content does not meet the accessibility criteria set out by WCAG. Violations occur when there are elements or functionalities on the website that fail to meet the required accessibility standards. For example, if an image lacks an appropriate text alternative for screen readers, it would be considered a WCAG violation.
- **Warnings:** Warnings are issues that might not necessarily violate the accessibility guidelines outright, but they indicate potential problems or areas of concern that could impact the user experience for people with disabilities. These issues might not be as severe as violations, but they still warrant attention. An example of a warning could be having low contrast text that might be difficult for some users to read.
- **Manual Checks:** Manual checks refer to the process of evaluating accessibility aspects of a website or content through human assessment. While automated accessibility testing tools can identify certain issues, they can't catch everything. Manual checks involve human testers reviewing the content and interactions to identify issues that might not be easily detectable by automated tools. These manual checks can include tasks like verifying that keyboard navigation is functional, confirming the correctness of alternative text for images, and ensuring that multimedia content is adequately captioned.

The aoj.am website has clear violations, warnings and elements that require a manual check on each page of the site. The folder included along with this document contains an individual summary report for each page of the site in CSV format.

Summary of findings:

Path	Violations	Warnings	Manual Checks
/ (root)	4	4	30
/about	6	4	23
/about/governingboard	5	5	24

<b>/about/rector</b>	6	4	23
<b>/about/academystructure</b>	6	4	23

<b>Path</b>	<b>Violations</b>	<b>Warnings</b>	<b>Manual Checks</b>
<b>/about/report</b>	6	4	23
<b>/about/graduates</b>	7	5	23
<b>/about/admission</b>	6	4	23
<b>/about/gallery</b>	6	4	23
<b>/about/mass-media</b>	6	4	23
<b>/news</b>	7	5	22
<b>/full-time-education</b>	4	5	25
<b>/full-time-education/ training-programs</b>	4	5	25
<b>/full-time-education/ conducting-exams</b>	6	4	23
<b>/full-time-education/ conducting-practice</b>	6	4	23
<b>/full-time-education/ rules-of-behavior</b>	6	4	23
<b>/full-time-education/ dormitory-rules</b>	6	4	23
<b>/full-time-education/ provide-deferral</b>	6	4	23
<b>/distance-learning</b>	6	4	23
<b>/distance-learning/ video-materials</b>	6	4	28
<b>/distance-learning/ courses</b>	6	5	29

/library	4	5	30
/library/academypublications	4	5	30
/library/manuals	5	5	29
/library/professionalliterature	6	4	23
/library/organizinglibrary-activities	6	4	23
/library/trainingmaterials	5	5	29
Path	Violations	Warnings	Manual Checks
/library/ECHRresources	6	4	23
/library/video-lectures	6	5	23
/library/investigatortraining-modules	4	5	30
/library/criminalprocedure-codes	6	5	23
/bulletin	4	4	28
/partners	5	5	28
/contacts	8	5	28
TOTALS	190	151	852

## Descriptions of Violations, Warnings and Manual Checks Found in aoj.am

### Violation Categories

**LANDMARK: All content must be contained in landmarks**

Summary

All content must be contained in landmarks

Definition

All rendered content must be placed inside of container elements with appropriate ARIA landmark roles.

## Rule Scope Element

### Action

V: Update the landmark structure of the page by placing the one element not contained in a landmark into a container element with a proper landmark role.

H: 71 hidden elements with renderable content were found. If any could become visible make sure they are in container elements with proper landmark roles.

### Purpose

Landmarks provide a way to organize the various types of content on a page for users of assistive technologies. The organization of content regions using landmarks is functionally similar to the way visual designers organize information for people who rely on a graphical rendering of the content.

When content is not contained in a landmark, it will be unreachable using landmark navigation, which is an important feature provided by assistive technologies such as screen readers.

### Techniques

- \* Use the appropriate landmarks to identify the different regions of content on a web page. \*  
The most important landmark roles are MAIN and NAVIGATION, as nearly every page will include at least those regions.
- \* Other commonly used landmark roles include BANNER, CONTENTINFO, COMPLEMENTARY and SEARCH.
- \* Use HTML5 sectioning elements that have a default ARIA landmark role: MAIN (MAIN), NAV (NAVIGATION), ASIDE (COMPLEMENTARY) and in some situations HEADER (BANNER) and FOOTER (CONTENTINFO). When using these elements, the ROLE attribute should NOT be defined.
- \* In HTML4 and XHTML 1.0 documents, a landmark can be created using a DIV element with a ROLE attribute and the appropriate ARIA landmark role value (e.g., ROLE="MAIN").
- \* The SEARCH role is typically placed on a FORM element or a DIV that surrounds the search form.

### Target Elements

- \* Page
- \* all

### Compliance

WCAG Level A, Required

### WCAG Success Criteria

- \* Success Criterion 1.3.1 Info and Relationships (Primary)  
(<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.1 Bypass Blocks (<https://www.w3.org/TR/WCAG21/#bypass-blocks>) \*  
Success Criterion 2.4.6 Headings and Labels  
(<https://www.w3.org/TR/WCAG21/#headingsand-labels>)

- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

#### Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.1 Specification: Landmark Roles ([https://www.w3.org/TR/wai-aria-1.2/#landmark\\_roles](https://www.w3.org/TR/wai-aria-1.2/#landmark_roles))
- \* HTML5: Sections (<https://www.w3.org/TR/html5/sections.html#sections>)
- \* WAI-ARIA Authoring Practices 1.2: Landmarks ([https://w3c.github.io/aria-practices/#aria\\_landmark](https://w3c.github.io/aria-practices/#aria_landmark))
- \* WAI-ARIA Authoring Practices 1.2: Landmark Example (<https://w3c.github.io/aria-practices/examples/landmarks/>)
- \* W3C Web Accessibility Tutorials: Page Structure (<https://www.w3.org/WAI/tutorials/page-structure/>)
- \* ARIA11: Using ARIA landmarks to identify regions of a page (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA11>)
- \* ARIA13: Using aria-labelledby to name regions and landmarks (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA13>)
- \* ARIA14: Using aria-label to provide an invisible label where a visible label cannot be used (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA14>)

#### **LANDMARK: Landmarks must be uniquely identifiable**

#### Summary

Landmarks must be uniquely identifiable

#### Definition

Multiple instances of landmarks with the same role must have unique accessible names.

#### Rule Scope Element

#### Action

V: Review the labeling of 5 landmarks to ensure that, if any other landmarks of the same type exist on the page, each has a unique accessible name. H: One landmark that is hidden was not evaluated.

#### Purpose

Landmarks identify the regions of content on a page.

When a landmark does not have an author-defined accessible name, assistive technologies will use its ARIA role as an identifier.

When there is more than one landmark of the same type on the page (e.g., multiple NAVIGATION and/or REGION landmarks), additional labeling through the use of author-defined accessible names is needed to allow users to differentiate among them.

#### Techniques

- \* Use the ARIA-LABELLEDBY attribute to provide a unique accessible name by referencing the ID of a heading or other element on the page that describes the content of the landmark. \*
- Use the ARIA-LABEL attribute to provide a unique accessible name that describes the content of the landmark.

- \* The TITLE attribute may be used to provide a unique accessible name that describes the content of the landmark. Note, however, that many browsers will also generate a tooltip from the TITLE attribute value.
- \* While ARIA landmarks may be defined using the ROLE attribute, some HTML5 sectioning elements have default landmark roles (e.g., MAIN, NAV, ASIDE, and in some situations, HEADER and FOOTER). Thus when multiple NAV elements, for example, are used on a page, define a unique accessible name for each of them.

## Target Elements

- \* main
- \* nav
- \* header
- \* footer
- \* section
- \* aside
- \* [role="application"]
- \* [role="banner"]
- \* [role="complementary"]
- \* [role="contentinfo"]
- \* [role="form"]
- \* [role="main"]
- \* [role="navigation"]
- \* [role="region"]
- \* [role="search"]

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 1.3.1 Info and Relationships (Primary)  
(<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.1 Bypass Blocks (<https://www.w3.org/TR/WCAG21/#bypass-blocks>) \*
- Success Criterion 2.4.6 Headings and Labels  
(<https://www.w3.org/TR/WCAG21/#headingsand-labels>)
- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

## Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.1 Specification: region role (<https://www.w3.org/TR/wai-aria-1.2/#region>)
- \* HTML5: Sections (<https://www.w3.org/TR/html5/sections.html#sections>)
- \* WAI-ARIA Authoring Practices 1.2: Landmarks ([https://w3c.github.io/aria-practices/#aria\\_landmark](https://w3c.github.io/aria-practices/#aria_landmark))
- \* WAI-ARIA Authoring Practices 1.2: Landmark Example (<https://w3c.github.io/aria-practices/examples/landmarks/>)
- \* W3C Web Accessibility Tutorials: Page Structure (<https://www.w3.org/WAI/tutorials/page-structure/>)

- \* ARIA11: Using ARIA landmarks to identify regions of a page  
(<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA11>)
- \* ARIA13: Using aria-labelledby to name regions and landmarks  
(<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA13>)
- \* ARIA14: Using aria-label to provide an invisible label where a visible label cannot be used  
(<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA14>)

## **LINK: Link text must describe the link target**

### Summary

Link text must describe the link target

### Definition

The accessible name of a link must accurately describe the target or purpose of the link.

### Rule Scope Element

### Action

V: Add text content to the empty link that describes the target of the link.

MC: Verify the accessible name of each of the 24 A, AREA or [ROLE=LINK] elements describes the target of the link.

H: 67 hidden links were not evaluated.

### Purpose

When the accessible name of a link does not describe its target or purpose, users will not have the information they need to determine the usefulness of the target resources.

Following links to target resources that do not provide the expected informational value is inefficient and potentially frustrating.

### Techniques

- \* The text content of a link, which is its default accessible name, should uniquely describe the target or purpose of the link.
- \* Use ARIA-LABEL, ARIA-LABELLEDBY or the TITLE attribute to provide a more descriptive accessible name when the text content of the link cannot be changed.
- \* Use ARIA-DESCRIBEDBY to provide additional information for links that share the same accessible name but have different contexts to allow users to differentiate among them. \* If the content of a link includes an IMG element, the accessible name for the link will incorporate the text alternative specified for the image.

### Target Elements

- \* a
- \* area
- \* [role=link]

### Compliance

WCAG Level A, Required

### WCAG Success Criteria

- \* Success Criterion 2.4.4 Link Purpose (In Context) (Primary) (<https://www.w3.org/TR/WCAG21/#link-purpose-in-context>)
- \* Success Criterion 2.4.9 Link Purpose (Link Only) (<https://www.w3.org/TR/WCAG21/#link-purpose-link-only>)

#### Additional Information

- \* HTML 4.01 Specification: 12.2 The A element (<https://www.w3.org/TR/html4/struct/links.html#edef-A>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABEL attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-label>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABELLEDBY attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-labelledby>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-DESCRIBEDBY attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-describedby>)
- \* HTML 4.01 Specification: The TITLE attribute (<https://www.w3.org/TR/html4/struct/global.html#edef-title>)
- \* H30: Providing link text that describes the purpose of a link for anchor elements (<https://www.w3.org/WAI/WCAG21/Techniques/html/H30>)
- \* OAA Example 44 - Using aria-describedby to satisfy WCAG 2.4.4 Link Purpose in Context (<https://oaa-accessibility.org/example/44/>)

### **CONTROL: Form controls must have labels**

#### Summary

Form controls must have labels

#### Definition

Each INPUT, SELECT, TEXTAREA, PROGRESS, METER and OUTPUT element must have an accessible label.

#### Rule Scope Element

#### Action

V: Add a label to the form control element that is unlabelled.

#### Purpose

A label associated with a form control ensures that information about the form control is spoken by screen readers when it receives focus.

#### Techniques

- \* The preferred technique for labeling form controls is by reference: First, include an ID attribute on the form control to be labeled; then use the LABEL element with a FOR attribute value that references the ID value of the control.
- \* An alternative technique is to use the LABEL element to encapsulate the form control element.
- \* In special cases, the ARIA-LABELLEDBY attribute can be used on the form control element to reference the id(s) of the elements on the page that describe its purpose.
- \* In special cases, the ARIA-LABEL attribute can be used on the form control element to provide an explicit text description of its purpose.



- \* In special cases, the TITLE attribute on the form control element can be used to provide an explicit text description of its purpose.

#### Target Elements

- \* input[type="checkbox"]
- \* input[type="date"]
- \* input[type="file"]
- \* input[type="radio"]
- \* input[type="number"]
- \* input[type="password"]
- \* input[type="tel"]
- \* input[type="text"]
- \* input[type="url"]
- \* select
- \* textarea
- \* meter
- \* progress

#### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 3.3.2 Labels or Instructions (Primary) (<https://www.w3.org/TR/WCAG21/#labels-or-instructions>)
- \* Success Criterion 1.3.1 Info and Relationships (<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.6 Headings and Labels (<https://www.w3.org/TR/WCAG21/#headings-and-labels>)

#### Additional Information

- \* HTML 4.01 Specification: The LABEL element (<https://www.w3.org/TR/html4/interact/forms.html#edef-LABEL>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABEL attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-label>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABELLEDBY attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-labelledby>)
- \* HTML 4.01 Specification: The TITLE attribute (<https://www.w3.org/TR/html4/struct/global.html#edef-title>)
- \* W3C WAI Accessibility Tutorials: Forms Concepts (<https://www.w3.org/WAI/tutorials/forms/>)
- \* H44: Using label elements to associate text labels with form controls (<https://www.w3.org/WAI/WCAG21/Techniques/html/H44>)
- \* H65: Using the title attribute to identify form controls when the label element cannot be used (<https://www.w3.org/WAI/WCAG21/Techniques/html/H65>)
- \* H71: Providing a description for groups of form controls using fieldset and legend elements (<https://www.w3.org/WAI/WCAG21/Techniques/html/H71>)

**COLOR: Text must exceed CCR threshold**

## Summary

Text must exceed CCR threshold

## Definition

Text content must exceed Color Contrast Ratio (CCR) of 3.1 for large and/or bolded text and 4.5 for any other size or style of text.

## Rule Scope Element

### Action

V: Change the foreground and background colors of the 3 text elements to meet the CCR threshold.

MC: 12 elements require manual checking for CCR threshold to the use of background images.

H: The 66 elements with text content that are hidden were not analyzed for color contrast accessibility.

### Purpose

The higher the color contrast of text the more easy it is to read, especially for people with visual impairments.

### Techniques

- \* Change the foreground color to a more complementary color to the background color.
- \* Change the background color to a more complementary color to the foreground color.
- \* Remove background images or verify they do not compromise color contrast requirements.

### Target Elements

- \* textnodes

### Compliance

WCAG Level AA, Required

### WCAG Success Criteria

- \* Success Criterion 1.4.3 Contrast (Minimum) (Primary)  
(<https://www.w3.org/TR/WCAG21/#contrast-minimum>)
- \* Success Criterion 1.4.1 Use of Color (<https://www.w3.org/TR/WCAG21/#use-of-color>) \*
- Success Criterion 1.4.6 Contrast (Enhanced)  
(<https://www.w3.org/TR/WCAG21/#contrastenhanced>)

### Additional Information

- \* WCAG 2.0 Success Criterion 1.4.3 Contrast (Minimum): The visual presentation of text and images of text has a contrast ratio of at least 4.5:1 (<https://www.w3.org/TR/WCAG20/#visual-audio-contrast-contrast>)
- \* How to meet Success Criterion 1.4.3 Contrast (Minimum): The visual presentation of text and images of text has a contrast ratio of at least 4.5:1 (<https://www.w3.org/WAI/WCAG20/quickref/#qr-visual-audio-contrast>)
- \* G17: Ensuring that a contrast ratio of at least 7:1 exists between text (and images of text) and background behind the text (<https://www.w3.org/WAI/WCAG21/Techniques/general/G17>)
- \* G18: Ensuring that a contrast ratio of at least 4.5:1 exists between text (and images of text) and background behind the text (<https://www.w3.org/WAI/WCAG21/Techniques/general/G18>)
- \* G148: Not specifying background color, not specifying text color, and not using technology features that change those default (<https://www.w3.org/WAI/WCAG21/Techniques/general/G148>)
- \* G174: Providing a control with a sufficient contrast ratio that allows users to switch to a presentation that uses sufficient contrast (<https://www.w3.org/WAI/WCAG21/Techniques/general/G174>)

## **HEADING: Headings nested in landmarks**

### Summary

Headings nested in landmarks

### Definition

Headings must be properly nested within a landmark.

### Rule Scope Element

### Action

V: Review the heading structure within the landmark and adjust the heading levels such that all are properly nested.

### Purpose

Headings provide a way to indicate the structure and to label the sections of content within a landmark.

Headings and their associated heading levels provide a way for people using assistive technology to understand and navigate the structure of the content within a landmark.

### Techniques

- \* Use an H1 element for the first heading in MAIN landmarks.
- \* Use an H2 element for the first heading in other top level landmarks.
- \* Use heading elements to identify the content of each section within a landmark.
- \* Properly nest heading elements within a landmark (e.g. H2 follows H1 headings, H3 follows H2 headings, ...).

### Target Elements

- \* h1
- \* h2
- \* h3

- \* h4
- \* h5
- \* h6

Compliance

WCAG Level A, Required

WCAG Success Criteria

- \* Success Criterion 1.3.1 Info and Relationships (Primary)  
(<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.1 Bypass Blocks (<https://www.w3.org/TR/WCAG21/#bypass-blocks>) \*  
Success Criterion 2.4.6 Headings and Labels  
(<https://www.w3.org/TR/WCAG21/#headingsand-labels>)
- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.1 Specification: contentinfo role (<https://www.w3.org/TR/wai-aria-1.2/#contentinfo>)
- \* W3C Web Accessibility Tutorials: Page Structure  
(<https://www.w3.org/WAI/tutorials/pagestructure/>)

## **NAVIGATION: Consistent ordering of H1 and H2 labels**

Summary

Consistent ordering of H1 and H2 labels

Definition

Consistent ordering of H1 and H2 elements that label recurring page sections common across all pages in a website.

Rule Scope Website

Action

V: No H1 or H2 elements found on the page.

Purpose

One of the fundamental features of the web is the provision of easy access to useful information. Consistent ordering of H1 and H2 elements used to identify recurring page sections common across all pages in the website will make it easier for people to find information they are seeking and to navigate between and within pages.

Techniques

- \* Use an H1 element to identify the main content within a page.
- \* Use H2 elements to identify other recurring page sections such as navigation bars, web site search forms, footer information, etc.

Target Elements

- \* Website \* h2

Compliance  
WCAG Level AA, Required

#### WCAG Success Criteria

- \* Success Criterion 3.2.3 Consistent Navigation (Primary) (<https://www.w3.org/TR/WCAG21/#consistent-navigation>)
- \* Success Criterion 3.2.4 Consistent Identification (<https://www.w3.org/TR/WCAG21/#consistent-identification>)

#### Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: Landmark Roles ([https://www.w3.org/TR/wai-aria-1.2/#landmark\\_roles](https://www.w3.org/TR/wai-aria-1.2/#landmark_roles))
- \* G61: Presenting repeated components in the same relative order each time they appear (<https://www.w3.org/WAI/WCAG21/Techniques/general/G61>)

### **NAVIGATION: Consistent H1 and H2 page section labels**

#### Summary

Consistent H1 and H2 page section labels

#### Definition

Consistent accessible names for H1 and H2 elements that identify recurring page sections common across all pages in a website.

#### Rule Scope Website

#### Action

V: No H1 or H2 elements found on the page.

#### Purpose

One of the fundamental features of the web is the provision of easy access to useful information. Consistent accessible names of H1 and H2 elements used to identify recurring page sections common across all pages in the website will make it easier for people to find information they are seeking and to navigate between and within pages.

#### Techniques

- \* Use H1 elements to identify the main content within a page.
- \* Use H2 elements to identify other major sections within pages, e.g. navigation bars, web site search forms, footer information, etc.

#### Target Elements

\* Website \* h2

Compliance  
WCAG Level AA, Required

#### WCAG Success Criteria

- \* Success Criterion 3.2.4 Consistent Identification (Primary) (<https://www.w3.org/TR/WCAG21/#consistent-identification>)

- \* Success Criterion 3.2.3 Consistent Navigation (<https://www.w3.org/TR/WCAG21/#consistent-navigation>)

#### Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: Landmark Roles ([https://www.w3.org/TR/wai-aria-1.2/#landmark\\_roles](https://www.w3.org/TR/wai-aria-1.2/#landmark_roles))
- \* G61: Presenting repeated components in the same relative order each time they appear (<https://www.w3.org/WAI/WCAG21/Techniques/general/G61>)

## Warning Categories

### HEADING: First landmark heading H2

#### Summary

First landmark heading H2

#### Definition

If a CONTENTINFO, COMPLEMENTARY, FORM, NAVIGATION or SEARCH landmark contains a heading element, the first heading should be an H2 element.

#### Rule Scope Element

#### Action

W: Adjust the heading structure within the landmark so that the first heading is an H2 element.

#### Purpose

Headings provide a redundant way for people to navigate and orient themselves to content on a web page.

The use of an H2 element as the first heading in a landmark (except the MAIN and BANNER landmarks) supports a consistent use of headings for finding the main sections in a web page.

#### Techniques

- \* Locate an H2 element at the beginning of the content in the landmark to describe the content in the landmark.
- \* The H2 element can be used as the accessible name for a landmark using the ARIA-LABELLEDBY attribute on the landmark to point to an ID attribute on the H2 element.
- \* The H2 element can be hidden from the graphical rendering using offscreen CSS positioning (e.g. POSITION: ABSOLUTE )techniques.

#### Target Elements

- \* h2
- \* [role="banner"]
- \* [role="contentinfo"]
- \* [role="complementary"]
- \* [role="form"]
- \* [role="navigation"]

\* [role="search"]

## Compliance

WCAG Level A, Recommended

## WCAG Success Criteria

- \* Success Criterion 1.3.1 Info and Relationships (Primary) (<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.1 Bypass Blocks (<https://www.w3.org/TR/WCAG21/#bypass-blocks>)
- \* Success Criterion 2.4.6 Headings and Labels (<https://www.w3.org/TR/WCAG21/#headings-and-labels>)
- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

## Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2 Specification: landmark roles (<https://www.w3.org/TR/wai-aria-1.2/#landmark>)
- \* HTML 4.01 Specification: Headings: The H2 elements (<https://www.w3.org/TR/html4/struct/global.html#edef-H2>)

## **HEADING: Page should have H1 element**

### Summary

Page should have H1 element

### Definition

The page should contain at least one H1 element identifying and describing the main content of the page.

### Rule Scope Page

### Action

W: Add a descriptive H1 element at the beginning of the main content of the page.

### Purpose

An H1 heading provides an important navigation point for users of assistive technologies, allowing them to easily find the main content of the page.

An H1 heading is often also used in the banner of a web page to identify and describe the website.

Home pages of websites often have a variety of "main" sections (e.g. navigation links, news, calendars, ...) that could be considered having somewhat equal potential interest by a visitor, these sections could each be identified using H1 headings.

### Techniques

- \* Include an H1 element at the beginning of the main content.
- \* The accessible name of the H1 element should describe the main content of the page. \* The accessible name of the H1 element in the banner of the page, should identify and describe the website.

- \* The H1 element should be visible graphically and to assistive technologies. It should not be hidden using CSS techniques.

#### Target Elements

- \* Page \* h1

#### Compliance

WCAG Level A, Recommended

#### WCAG Success Criteria

- \* Success Criterion 2.4.1 Bypass Blocks (Primary) (<https://www.w3.org/TR/WCAG21/#bypass-blocks>)
- \* Success Criterion 1.3.1 Info and Relationships (<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.2 Page Titled (<https://www.w3.org/TR/WCAG21/#page-titled>) \* Success Criterion 2.4.6 Headings and Labels (<https://www.w3.org/TR/WCAG21/#headingsand-labels>)
- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

#### Additional Information

- \* HTML 4.01 Specification: The H1 element (<https://www.w3.org/TR/html4/struct/global.html#edef-H1>)
- \* G130: Providing descriptive headings (<https://www.w3.org/WAI/WCAG21/Techniques/general/G130>)
- \* G141: Organizing a page using headings (<https://www.w3.org/WAI/WCAG21/Techniques/general/G141>)
- \* W3C Web Accessibility Tutorials: Headings (<https://www.w3.org/WAI/tutorials/pagestructure/headings/>)

### **HEADING: Headings should have text content**

#### Summary

Headings should have text content

#### Definition

Heading elements should have visible text content.

#### Rule Scope Element

#### Action

W: For the 11 heading elements with only image content, replace the images with text content styled using CSS.

#### Purpose

Heading elements that consist only of image content are not easily restyled for readability by people with low vision.

#### Techniques

- \* Use CSS instead of images to style heading text content.



## Target Elements

- \* h1
- \* h2
- \* h3
- \* h4
- \* h5
- \* h6

## Compliance

WCAG Level A, Recommended

## WCAG Success Criteria

- \* Success Criterion 1.3.1 Info and Relationships (Primary) (<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.6 Headings and Labels (<https://www.w3.org/TR/WCAG21/#headings-and-labels>)
- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

## Additional Information

- \* HTML 4.01 Specification: Headings: The H1, H2, H3, H4, H5, H6 elements (<https://www.w3.org/TR/html4/struct/global.html#edef-H1>)
- \* C22: Using CSS to control visual presentation of text (<https://www.w3.org/TR/WCAG20-TECHS/C22>)
- \* W3C Web Accessibility Tutorials: Headings (<https://www.w3.org/WAI/tutorials/page-structure/headings/>)

## **HEADING: Sibling headings should be unique**

### Summary

Sibling headings should be unique

### Definition

The accessible names of sibling heading elements of the same level should be unique.

### Rule Scope Element

### Action

W: Update the accessible names of the 11 sibling heading elements of the same level to be unique.

### Purpose

If section headings that share the same parent heading are NOT unique, users of assistive technologies will not be able to discern the differences among sibling sections of the web page.

### Techniques

- \* Make sure the accessible names of sibling headings that share the same parent heading help users understand the unique content of each section they describe.

## Target Elements

- \* h1
- \* h2
- \* h3
- \* h4
- \* h5
- \* h6

## Compliance

WCAG Level AA, Recommended

## WCAG Success Criteria

- \* Success Criterion 2.4.6 Headings and Labels (Primary)  
(<https://www.w3.org/TR/WCAG21/#headings-and-labels>)
- \* Success Criterion 1.3.1 Info and Relationships (<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

## Additional Information

- \* HTML 4.01 Specification: Headings: The H1, H2, H3, H4, H5, H6 elements (<https://www.w3.org/TR/html4/struct/global.html#edef-H1>)
- \* G130: Providing descriptive headings  
(<https://www.w3.org/WAI/WCAG21/Techniques/general/G130>)
- \* G141: Organizing a page using headings  
(<https://www.w3.org/WAI/WCAG21/Techniques/general/G141>)
- \* W3C Web Accessibility Tutorials: Headings (<https://www.w3.org/WAI/tutorials/page-structure/headings/>)

## **LINK: Link text should be unique**

### Summary

Link text should be unique

### Definition

Links with different HREFs should have unique accessible names or descriptions.

### Rule Scope Element

### Action

W: Change the accessible names or add ARIA-DESCRIBEDBY attributes to the 7 A, AREA or [ROLE=LINK] elements to provide additional information that makes each accessible name or description unique.

### Purpose

Screen reader programs provide commands that list all links on a page by their accessible names. When links are taken out of their page context and placed in the context of such a list, links with the same accessible name appear to refer to the same informational resource. When

links that point to different URLs have the same accessible name or description, screen reader users may be unable to determine which link among them references the information they are seeking.

#### Techniques

- \* The link text (i.e. its accessible name and/or description) should uniquely describe the target of a link.
- \* Use the ARIA-LABEL, ARIA-LABELLEDBY or TITLE attribute to provide a more descriptive accessible name when the text content of the link cannot be changed.
- \* Use ARIA-DESCRIBEDBY to provide additional information for links that share the same accessible name but have different contexts to allow users to differentiate among them.

#### Target Elements

- \* a
- \* area
- \* [role=link]

#### Compliance

WCAG Level A, Recommended

#### WCAG Success Criteria

- \* Success Criterion 2.4.4 Link Purpose (In Context) (Primary) (<https://www.w3.org/TR/WCAG21/#link-purpose-in-context>)
- \* Success Criterion 2.4.9 Link Purpose (Link Only) (<https://www.w3.org/TR/WCAG21/#link-purpose-link-only>)

#### Additional Information

- \* HTML 4.01 Specification: 12.2 The A element (<https://www.w3.org/TR/html4/struct/links.html#edef-A>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABEL attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-label>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABELLEDBY attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-labelledby>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-DESCRIBEDBY attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-describedby>)
- \* HTML 4.01 Specification: The TITLE attribute (<https://www.w3.org/TR/html4/struct/global.html#edef-title>)
- \* H30: Providing link text that describes the purpose of a link for anchor elements (<https://www.w3.org/WAI/WCAG21/Techniques/html/H30>)
- \* ARIA1: Using the aria-describedby property to provide a descriptive label for user interface controls (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA1>)
- \* ARIA7: Using aria-labelledby for link purpose (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA7>)
- \* ARIA8: Using aria-label for link purpose (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA8>)
- \* OAA Example 44 - Using aria-describedby to satisfy WCAG 2.4.4 Link Purpose in Context (<https://oaa-accessibility.org/example/44/>)

# Manual Check Categories

## IMAGE: Alt text must summarize purpose

### Summary

Alt text must summarize purpose

### Definition

The text alternative for IMG elements and elements with [ROLE="IMG"] must summarize the content and/or purpose of the image.

### Rule Scope Element

### Action

MC: Verify that the text alternative for each of the 16 IMG elements and/or elements with [ROLE="IMG"] accurately and succinctly summarizes the content and/or purpose of the image.

H: 5 IMG elements and/or elements with [ROLE="IMG"] that are hidden were not evaluated.

### Purpose

Images can convey a wide range of content and be used for many different purposes on a web page, from button and icon images that perform simple actions to complex graphics that help people visualize the features and relationships of large data sets.

Markup supports creating both short and long text alternatives. A short text alternative is designed to orient people who cannot see the image to the type of content it contains or its purpose on the page. A long text alternative or long description provides comprehensive details of the features of an image, e.g., the data used to generate a chart or graph, relationships in a flow chart, or a MathML version of a mathematical equation.

Images that function as buttons and perform an action on the page should have a short text alternative that is as succinct as possible (e.g., "Increase text size").

Informative images of photographs need a short text alternative and additionally can often benefit from long descriptions.

Informative images of charts or graphs need both a short text alternative and a long description to describe its purpose and the data used to create it.

If an image that is informative does not have text alternative content, users of assistive technologies will not have access to the information the image conveys.

### Techniques

\* Use the ALT attribute on IMG elements to provide a text alternative for the image. A rule of thumb is to use what you would say to someone over the phone to describe the image. \* The ARIA-LABELLEDBY attribute can be used to provide a text alternative when images can be described using text already associated with the image, such as a visible caption, or for elements with ROLE="IMG".

\* The ARIA-LABEL attribute should only be used to provide a text alternative in the special case when an element has a ROLE="IMG" attribute.

\* The TITLE attribute will be used by assistive technologies to provide a text alternative if no other specification technique is found. NOTE: Using the TITLE attribute will also generate a tooltip in some browsers.

- \* Use the attributes ALT="", ROLE="PRESENTATION" or include the image as a CSS BACKGROUND-IMAGE to identify it as being used purely for stylistic or decorative purposes and that it should be ignored by people using assistive technologies.

#### Target Elements

- \* img
- \* [role="img"]

#### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 1.1.1 Non-text Content (Primary) (<https://www.w3.org/TR/WCAG21/#non-text-content>)

#### Additional Information

- \* HTML 5 Specification: 12.2 The IMG element (<https://www.w3.org/TR/html5/embeddedcontent-0.html#the-img-element>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The IMG role (<https://www.w3.org/TR/wai-aria-1.2/#img>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABEL attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-label>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABELLEDBY attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-labelledby>)
- \* HTML 4.01 Specification: 13.8 How to specify alternate text (<https://www.w3.org/TR/html4/struct/objects.html#edef-alt>)
- \* Web Accessibility Tutorials : Images (<https://www.w3.org/WAI/tutorials/images/>)
- \* Diagram Center: Image Description (<http://diagramcenter.org/making-images-accessible.html>)
  - \* G94: Providing text alternative for non-text content that serves the same purpose and presents the same information as the non-text content (<https://www.w3.org/WAI/WCAG21/Techniques/general/G94>)
  - \* G95: Providing text alternatives that provide a brief description of the non-text content (<https://www.w3.org/WAI/WCAG21/Techniques/general/G95>)
- \* WebAIM: Alternative Text (<https://webaim.org/techniques/alttext/>)
- \* Accessibility at Penn State: Text Equivalents for Images (<https://accessibility.psu.edu/images/>)
  - \* Diagram Center: Digital Image And Graphic Resources for Accessible Materials (<https://diagramcenter.org/>)

### **IMAGE: Long description for complex images**

#### Summary

Long description for complex images

#### Definition

Complex images, charts or graphs (e.g. images generated from tabular data) must have long descriptions to provide an additional detailed description of the information conveyed by the image.

## Rule Scope Element

### Action

MC: Determine if any of the 16 IMG elements and/or elements with [ROLE="IMG"] can benefit from a long description, and for each that can, provide a detailed description of the content of the image.

H: 5 IMG elements and/or elements with [ROLE="IMG"] that are hidden were not evaluated.

### Purpose

A long description should provide more information and detail than the text alternative for the image (e.g. ALT attribute).

Images can convey a wide range of content and be used for many different purposes on a web page, from purely decorative to complex graphics helping people visualize the features and relationships of large data sets.

All users can benefit from long descriptions by providing another modality for the author to convey information contained in the image and by providing search engines with information to more accurately return relevant results.

Informative images of photographs or paintings can often benefit from long descriptions.

Informative images like charts or graphs need long descriptions to describe the data used to create the chart or graph.

### Techniques

- \* Ideally, the long description of an image should be accessible to all users by including it as part of the page content, and in close proximity to the image it describes.
- \* Use the ARIA-DESCRIBEDBY attribute to reference one or more IDs on the page that contain the long description. When this technique is used, assistive technologies extract the text content of the referenced IDs and make it available as concatenated, unstructured text (i.e., stripping out any list markup, links, paragraphs, etc.).
- \* Use the TITLE attribute to provide a long description.
- \* Use the ALT attribute or equivalent markup to indicate the presence and location of the long description when it consists of structured content (e.g. tabular data, lists, links) in close proximity to the image. For example, ALT="..., FOR MORE INFORMATION VIEW THE FOLLOWING DATA TABLE".
- \* Use the LONGDESC attribute, which requires a URI value, to link to a long description for an image. NOTES: (1) The URI can be an internal link on the same page as the image, or a link to an external page or a fragment thereof. (2) There is a discoverability problem with this technique in that the description will typically only be available to screen reader users. Therefore, until browser implementations for LONGDESC have improved, alternative techniques that enable all users to access the long description are preferred.
- \* Use techniques that allow all users to view the long description. For example, the SUMMARY/DETAILS elements can be used when the author prefers the detailed description to be initially hidden from users.

### Target Elements

- \* img
- \* [role="img"]

Compliance  
WCAG Level A, Required

#### WCAG Success Criteria

\* Success Criterion 1.1.1 Non-text Content (Primary) (<https://www.w3.org/TR/WCAG21/#non-text-content>)

#### Additional Information

- \* HTML 5 Specification: 12.2 The IMG element (<https://www.w3.org/TR/html5/embeddedcontent-0.html#the-img-element>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The IMG role (<https://www.w3.org/TR/wai-aria-1.2/#img>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-DESCRIBEDBY attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-describedby>)
- \* HTML5 Image Description Extension (longdesc) (<https://www.w3.org/TR/html-longdesc/>) \* HTML 4.01 Specification: 13.8 How to specify alternate text (<https://www.w3.org/TR/html4/struct/objects.html#edef-alt>)
- \* Web Accessibility Tutorials : Images (<https://www.w3.org/WAI/tutorials/images/>)
- \* Diagram Center: Image Description (<http://diagramcenter.org/making-images-accessible.html>)
  - \* G94: Providing text alternative for non-text content that serves the same purpose and presents the same information as the non-text content (<https://www.w3.org/WAI/WCAG21/Techniques/general/G94>)
- \* WebAIM: Alternative Text (<https://webaim.org/techniques/alttext/>)
- \* Accessibility at Penn State: Text Equivalents for Images (<https://accessibility.psu.edu/images/>)
  - \* Diagram Center: Digital Image And Graphic Resources for Accessible Materials (<https://diagramcenter.org/>)

#### **LANDMARK: REGION landmark must have accessible name**

##### Summary

REGION landmark must have accessible name

##### Definition

Each element with an [ROLE=REGION] that should be an REGION landmark must have an accessible name.

##### Rule Scope Element

##### Action

MC: Determine if any of the 3 elements with ARIA role of REGION should be landmarks, and if so, add an accessible name to the those elements.

##### Purpose

The REGION landmark is used to identify subsections of BANNER, COMPLEMENTARY, CONTENTINFO, MAIN, NAVIGATION and SEARCH landmarks.

For an element with an [ROLE=REGION] to be considered an REGION landmark on the page, it must have an accessible name that identifies the contents of the region.

## Techniques

- \* A SECTION element or an element with a ROLE="REGION" attribute, which also has an author-defined accessible name, will be considered an REGION landmark.
- \* Use the ARIA-LABELLED BY attribute to provide an accessible name by referencing the IDs of one or more heading (e.g. h2, h3, h4 element) or other elements that identify the contents of the region.
- \* Use the ARIA-LABEL attribute to provide an accessible name that identifies the contents of the region.
- \* The TITLE attribute may also be used to provide an accessible name to identify the contents of the region. Note, however, that this technique also generates a tooltip in many web browsers.

## Target Elements

- \* [role="region"]

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 1.3.1 Info and Relationships (Primary) (<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.1 Bypass Blocks (<https://www.w3.org/TR/WCAG21/#bypass-blocks>) \*  
Success Criterion 2.4.6 Headings and Labels (<https://www.w3.org/TR/WCAG21/#headingsand-labels>)
- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

## Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.1 Specification: region role (<https://www.w3.org/TR/wai-aria-1.2/#region>)
- \* HTML5: The SECTION element (<https://www.w3.org/TR/html5/sections.html#the-section-element>)
- \* WAI-ARIA Authoring Practices 1.2: Landmarks ([https://w3c.github.io/aria-practices/#aria\\_landmark](https://w3c.github.io/aria-practices/#aria_landmark))
- \* WAI-ARIA Authoring Practices 1.2: Landmark Example (<https://w3c.github.io/aria-practices/examples/landmarks/>)
- \* W3C Web Accessibility Tutorials: Page Structure (<https://www.w3.org/WAI/tutorials/page-structure/>)
- \* ARIA11: Using ARIA landmarks to identify regions of a page (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA11>)
- \* ARIA13: Using aria-labelledby to name regions and landmarks (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA13>)
- \* ARIA20: Using the region role to identify a region of the page (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA20>)
- \* ARIA14: Using aria-label to provide an invisible label where a visible label cannot be used (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA14>)

**LANDMARK: Landmarks must identify content regions**



## Summary

Landmarks must identify content regions

## Definition

Landmarks must identify regions of content on the page according to the ARIA Landmark Roles specification.

## Rule Scope Element

## Action

MC: Verify that each of the 4 landmark roles correctly identifies the content region for which its corresponding element is a container.

H: One landmark that is hidden was not evaluated.

## Purpose

When ARIA landmarks are used to identify regions of content on the page, users of assistive technologies gain programmatic access to those regions through built-in navigation commands. Proper use of landmarks provides a navigable structure where common sections or features of pages can be easily accessed or, conversely, skipped over if they represent repeated blocks of content.

If the appropriate landmark roles are NOT used, the type or purpose of each content region will be less obvious to users of assistive technologies.

In the worst-case scenario, when NO landmark roles are present, the content on the page will be presented to users of assistive technologies as a single undifferentiated block. Visual styling of blocks of content are often good indicators of potential landmarks (e.g. BANNER, MAIN, NAVIGATION, CONTENTINFO).

## Techniques

- \* Use the appropriate landmarks to identify the different regions of content on a web page. \* The most important landmark roles are MAIN and NAVIGATION, as nearly every page will include at least those regions.

- \* Other commonly used landmark roles include BANNER, CONTENTINFO, COMPLEMENTARY and SEARCH.

- \* Use HTML5 sectioning elements that have a default ARIA landmark role: MAIN (MAIN), NAV (NAVIGATION), ASIDE (COMPLEMENTARY) and in some situations HEADER (BANNER) and FOOTER (CONTENTINFO). When using these elements, the ROLE attribute should NOT be defined.

- \* In HTML4 and XHTML 1.0 documents, a landmark can be created using a DIV element with a ROLE attribute and the appropriate ARIA landmark role value (e.g., ROLE="MAIN").

- \* The SEARCH role is typically placed on a FORM element or a DIV that surrounds the search form.

- \* When there are multiple instances of a particular landmark role on a page, provide a unique accessible name for each landmark with the same role to enable users to differentiate among them.

- \* An alternative landmark can be created in HTML5 by using the SECTION element, which has a default landmark role of REGION, with an author-defined accessible name (e.g., using ARIA-LABELLEDBY to reference a heading element).

- \* Do not nest landmarks with the same role (e.g., do not place navigation landmarks within a navigation landmark). Instead, use the SECTION element technique described above to provide additional subsections within a standard landmark.
- \* If a region on a page does not correspond to one of the defined ARIA landmark roles, the SECTION element technique described above can be used to create a landmark container for the content.

## Target Elements

- \* main
- \* nav
- \* header
- \* footer
- \* section
- \* aside
- \* [role="application"]
- \* [role="banner"]
- \* [role="complementary"]
- \* [role="contentinfo"]
- \* [role="form"]
- \* [role="main"]
- \* [role="navigation"]
- \* [role="region"]
- \* [role="search"]

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 1.3.1 Info and Relationships (Primary)  
(<https://www.w3.org/TR/WCAG21/#info-and-relationships>)
- \* Success Criterion 2.4.1 Bypass Blocks (<https://www.w3.org/TR/WCAG21/#bypass-blocks>) \*
- Success Criterion 2.4.6 Headings and Labels  
(<https://www.w3.org/TR/WCAG21/#headingsand-labels>)
- \* Success Criterion 2.4.10 Section Headings (<https://www.w3.org/TR/WCAG21/#section-headings>)

## Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.1 Specification: Landmark Roles ([https://www.w3.org/TR/wai-aria-1.2/#landmark\\_roles](https://www.w3.org/TR/wai-aria-1.2/#landmark_roles))
- \* HTML5: Sections (<https://www.w3.org/TR/html5/sections.html#sections>)
- \* WAI-ARIA Authoring Practices 1.2: Landmarks ([https://w3c.github.io/aria-practices/#aria\\_landmark](https://w3c.github.io/aria-practices/#aria_landmark))
- \* WAI-ARIA Authoring Practices 1.2: Landmark Example (<https://w3c.github.io/aria-practices/examples/landmarks/>)
- \* W3C Web Accessibility Tutorials: Page Structure (<https://www.w3.org/WAI/tutorials/page-structure/>)

- \* ARIA11: Using ARIA landmarks to identify regions of a page (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA11>)
- \* ARIA13: Using aria-labelledby to name regions and landmarks (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA13>)
- \* ARIA14: Using aria-label to provide an invisible label where a visible label cannot be used (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA14>)

## **LIST: Use semantic markup for lists**

### Summary

Use semantic markup for lists

### Definition

Page must use semantic markup for lists: to identify the type of list container (ordered, unordered or description list) and to group its related list item elements.

### Rule Scope Page

### Action

MC: Verify the 11 list elements are used semantically.

H: The 76 hidden list elements were not evaluated.

### Purpose

When list markup is used semantically, assistive technologies are able to convey information to users as they navigate to and within lists, such as the total number of items and the relative position of each item in the list.

Assistive technologies also provide additional navigation commands for lists, such as "Go to next list item" and "Go to next list".

Concision of list item content is important for accessibility, since assistive technologies read the entire content of each list item when users navigate through lists.

When list markup is used in ways that violate the semantics of lists, it will be confusing to users of assistive technologies and diminish the accessibility of the page.

### Techniques

- \* Ensure that list item content is concise.
- \* You can use ARIA labeling techniques to give a list container element a descriptive label.
- \* Use OL as a container element for an ordered list of items.
- \* Use UL as a container element for an unordered list of items.
- \* Use LI elements to identify items in ordered (OL) and unordered (UL) lists.
- \* Use DL as a container element for a description list (a.k.a. definition list) that contains contiguous groupings of terms and their associated descriptions or definitions. \* Use DT elements to identify terms being described or defined in a description list (DL).
- \* Use DD elements to identify descriptions or definitions for a term in a description list (DL). \* For repairing existing content that does not use list elements, you can use the ARIA ROLE attributes with value [ROLE="LIST"] or [ROLE="GROUP"] TO IDENTIFY LIST CONTAINER ELEMENTS AND [role="listitem"] TO IDENTIFY LIST ITEM ELEMENTS.

### Target Elements

- \* ul
- \* ol
- \* li
- \* dl
- \* dt
- \* dd
- \* [role="list"]
- \* [role="listitem"] \* [role="group"]

Compliance

WCAG Level A, Required

WCAG Success Criteria

- \* Success Criterion 1.3.1 Info and Relationships (Primary)  
(<https://www.w3.org/TR/WCAG21/#info-and-relationships>)

Additional Information

- \* HTML5: ol element (<https://www.w3.org/TR/html5/grouping-content.html#the-ol-element>)
- \* HTML5: ul element (<https://www.w3.org/TR/html5/grouping-content.html#the-ul-element>)
- \* HTML5: li element (<https://www.w3.org/TR/html5/grouping-content.html#the-li-element>)
- \* HTML5: dl element (<https://www.w3.org/TR/html5/grouping-content.html#the-dl-element>)
- \* HTML5: dt element (<https://www.w3.org/TR/html5/grouping-content.html#the-dt-element>)
- \* HTML5: dd element (<https://www.w3.org/TR/html5/grouping-content.html#the-dd-element>) \*
- Accessible Rich Internet Applications (WAI-ARIA) 1.2: group role  
(<https://www.w3.org/TR/waiaria-1.2/#group>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: list role (<https://www.w3.org/TR/wai-aria-1.2/#list>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: listitem role  
(<https://www.w3.org/TR/wai-aria-1.2/#listitem>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: aria-posinset  
(<https://www.w3.org/TR/wai-aria-1.2/#aria-posinset>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: aria-setsize (<https://www.w3.org/TR/wai-aria-1.2/#aria-setsize>)

## **LIST: Provide list labels when appropriate**

Summary

Provide list labels when appropriate

Definition

When appropriate, a list container element (UL, OL, DL, [ROLE="LIST"], [ROLE="GROUP"]) should include a label that describes the purpose or contents of the list.

Rule Scope Element

Action

MC: Determine whether the container element benefits from a label and, if so, verify that it accurately describes the contents of the list. H: The hidden list element was not evaluated.

#### Purpose

Assistive technologies use labels on UL, OL and DL elements, and elements with [ROLE="LIST"] and [ROLE="GROUP"] attributes to help screen reader users understand the purpose or contents of lists.

#### Techniques

- \* Use the ARIA-LABELLEDBY attribute to add a label to a list container element to reference the ID(s) of one or more elements on the page that describe its contents.
- \* Use the ARIA-LABEL attribute to add a label to a list container element to provide an explicit text description of its contents.
- \* The TITLE attribute can also be used to add a label to a list container element to provide an explicit text description of its contents.

#### Target Elements

- \* ul \* ol
- \* [role="list"]
- \* [role="group"]

#### Compliance

WCAG Level AA, Recommended

#### WCAG Success Criteria

- \* Success Criterion 2.4.6 Headings and Labels (Primary) (<https://www.w3.org/TR/WCAG21/#headings-and-labels>)
- \* Success Criterion 1.3.1 Info and Relationships (<https://www.w3.org/TR/WCAG21/#info-and-relationships>)

#### Additional Information

- \* HTML5: ol element (<https://www.w3.org/TR/html5/grouping-content.html#the-ol-element>)
- \* HTML5: ul element (<https://www.w3.org/TR/html5/grouping-content.html#the-ul-element>)
- \* HTML5: dl element (<https://www.w3.org/TR/html5/grouping-content.html#the-dl-element>) \*
- Accessible Rich Internet Applications (WAI-ARIA) 1.2: group role (<https://www.w3.org/TR/waiaria-1.2/#group>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: list role (<https://www.w3.org/TR/wai-aria-1.2/#list>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABEL attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-label>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: The ARIA-LABELLEDBY attribute (<https://www.w3.org/TR/wai-aria-1.2/#aria-labelledby>)
- \* HTML 4.01 Specification: The TITLE attribute (<https://www.w3.org/TR/html4/struct/global.html#edef-title>)

### **ORDER: Reading order: CSS positioning**

#### Summary

Reading order: CSS positioning

#### Definition

Elements positioned using CSS ABSOLUTE, RELATIVE or FIXED must maintain a meaningful reading order of content.

#### Rule Scope

##### Page

#### Action

MC: Verify the 42 elements positioned with CSS maintain a reading order meaningful to users of assistive technologies.

H: 17 elements positioned with CSS that are hidden were not evaluated.

#### Purpose

If the reading order of text content on the page is presented to users of assistive technologies in an order that does not match the intention of the author, reading comprehension will be affected. In worst-case scenarios, the meaning of the out-of-order content may contradict or bear little resemblance to the intended meaning.

Assistive technologies render web page content based upon the sequence of the DOM elements within the HTML document.

Web page designs that rely upon TABLE markup for layout or advanced CSS positioning techniques and JavaScript to rearrange content may result in a visual rendering of content that differs in reading order from the actual DOM ordering used by assistive technologies. Thus while the visual rendering may appear to have the correct or desired reading order, when rendered by assistive technologies such as screen readers, the actual reading order will be incorrect and correspondingly illogical.

The relationship of the DOM order of content to the intended reading order is therefore very important for ensuring that information is logically presented to users of assistive technologies.

#### Techniques

- \* Minimize the use of CSS POSITION values of ABSOLUTE, RELATIVE and FIXED.
- \* Make sure related content moves as a block when repositioning content on a page.

#### Target Elements

#### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 1.3.2 Meaningful Sequence (Primary)  
(<https://www.w3.org/TR/WCAG21/#meaningful-sequence>)

#### Additional Information

- \* WCAG 2.0 Success Criterion 1.3.2 Meaningful Sequence  
(<https://www.w3.org/TR/WCAG20/#content-structure-separation-sequence>)
- \* Cascading Style Sheets Level 2 Revision 1 (CSS 2.1) Specification: position property (<https://www.w3.org/TR/CSS2/visuren.html#propdef-position>)

**SENSORY: Not only shape, size and location**

## Summary

Not only shape, size and location

## Definition

Understanding and operating on content on the page must not rely solely on the shape, size, visual location, orientation, or sound.

## Rule Scope

Page

Action

MC: Verify that understanding the content, navigation of links and operation of controls and widgets does not depend solely on the shape, size, visual location, orientation, or sound.

## Purpose

People with visual impairments and learning disabilities that affect the visual processing of information may not be able to perceive the content or identify the purpose of links and controls. People with hearing impairments and learning disabilities that affect the auditory processing of information may not be able to perceive the content or identify the purpose of links and controls.

## Techniques

- \* Provide redundant text labels and references in addition to references to shape, size, visual location or sound.

## Target Elements

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 1.3.3 Sensory Characteristics (Primary)  
(<https://www.w3.org/TR/WCAG21/#sensory-characteristics>)

## Additional Information

- \* WCAG 2.0 Success Criterion 1.3.3 Sensory Characteristics (<https://www.w3.org/TR/WCAG20/#content-structure-separation-understanding>)
- \* How to meet Success Criterion 1.3.3 Sensory Characteristics (<https://www.w3.org/WAI/WCAG20/quickref/#qr-content-structure-separation-understanding>)

## **COLOR: Use of color**

## Summary

Use of color

## Definition

Color must not be the only way to convey information on the page.

## Rule Scope Page

Action

MC: Verify color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element on the page.

#### Purpose

For people with color blindness and other forms of visual impairments will not be able to see colors or color differences.

This requirement also includes references to color of content on page to identify some type of information, there should be redundant labeling of the content, for example using text labels to also identify and refer to the information.

#### Techniques

- \* Provide redundant text labels for content presented in color, if the color is presenting meaningful information.
- \* Use background patterns to also identify information.

#### Target Elements

#### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 1.4.1 Use of Color (Primary) (<https://www.w3.org/TR/WCAG21/#use-of-color>)

#### Additional Information

- \* WCAG 2.0 Success Criterion 1.4.1 Use of Color (<https://www.w3.org/TR/WCAG20/#visual-audio-contrast-without-color>)
- \* How to meet Success Criterion 1.4.1 Use of Color (<https://www.w3.org/WAI/WCAG20/quickref/#qr-visual-audio-contrast-without-color>)
- \* G14: Ensuring that information conveyed by color differences is also available in text (<https://www.w3.org/WAI/WCAG21/Techniques/general/G14>)

### **AUDIO: Pause, stop or mute audio**

#### Summary

Pause, stop or mute audio

#### Definition

Media content with audio that automatically starts playing when the page loads and lasts longer than 3 seconds must provide a means for the user able to stop, pause or mute the audio content.

#### Rule Scope Page

#### Action

MC: Verify that there is no media content that plays automatically and includes audio content that lasts longer than 3 seconds. If the audio content lasts longer than 3 seconds, verify the user can pause, stop or mute the audio.

#### Purpose



Audio content interferes with people using speech based assistive technologies like screen readers.

#### Techniques

- \* Remove or disable the auto playing of media that includes audio content.
- \* Provide a means to pause, stop or mute the audio content.
- \* Use cookies to preserve the user preference of pausing, stopping or muting the audio content.

#### Target Elements

#### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 1.4.2 Audio Control (Primary) (<https://www.w3.org/TR/WCAG21/#audio-control>)

#### Additional Information

- \* WCAG 2.0 Success Criterion 1.4.2 Audio Control (<https://www.w3.org/TR/WCAG20/#visual-audio-contrast-dis-audio>)
- \* How to meet Success Criterion 1.4.2 Audio Control (<https://www.w3.org/WAI/WCAG20/quickref/#qr-visual-audio-contrast-dis-audio>)
- \* University of Washington: Creating Accessible Videos (<https://www.washington.edu/accessibility/videos/>)
- \* WebAIM: Captions, Transcripts, and Audio Descriptions (<https://webaim.org/techniques/captions/>)

### **TIMING: Control time limits**

#### Summary

Control time limits

#### Definition

A page that contains time limits for user interaction or viewing content must provide a way to turn off, adjust or extend the time limits.

#### Rule Scope Element

#### Action

MC: If the page contains time limits, verify that there is a way to turn off, adjust or extend the time limits; or that one of the three exceptions applies.

#### Purpose

People with physical disabilities may need more time to respond to web sites with time limits for selecting an option.

People with visual impairments and visual processing learning disabilities may need more time to read material if the rendering of the material is automatically removed or obscured after a time period.

Providing adjustable time periods in line with the persons capabilities makes it possible for people to complete the tasks associated with the website.

#### Techniques

- \* Turn off: The user is allowed to turn off the time limit before encountering it.
- \* 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.
- \* 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 time.
- \* 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.
- \* Essential Exception: The time limit is essential and extending it would invalidate the activity. \*
- 20 Hour Exception: The time limit is longer than 20 hours.

#### Target Elements

- \* a
- \* input
- \* button
- \* wdiget

#### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 2.2.1 Timing Adjustable (Primary)  
(<https://www.w3.org/TR/WCAG21/#timing-adjustable>)

#### Additional Information

- \* How to meet 2.2.1 Timing Adjustable (<https://www.w3.org/WAI/WCAG20/quickref/#qr-time-limits-required-behaviors>)

### **TIMING: Control moving, blinking or auto-updating content**

#### Summary

Control moving, blinking or auto-updating content

#### Definition

A page that includes moving, blinking, scrolling or auto-updating content that starts automatically and lasts more than 5 seconds must have a mechanism to pause, stop, or hide such content.

#### Rule Scope Element

#### Action

MC: If the page includes moving, blinking, scrolling or auto-updating content, verify there has a mechanism to pause, stop, or hide the information.

H: Message is missing for rule id: TIMING\_2 and mesage id: HIDDEN\_P

## Purpose

People with visual impairments and visual processing learning disabilities may not be able to read or understand content that is blinking, scrolling or auto updating

## Techniques

- \* Pause/Resume: Through configuration or controls on the page, enable the user to pause and resume the moving, blinking, scrolling or auto-updating content.
- \* Stop: Through configuration or controls on the page, enable the user to stop the moving, blinking, scrolling or auto-updating content and see all of the content at one time.
- \* Hide: Through configuration or controls on the page, enable the user to hide the moving, blinking, scrolling or auto-updating content if it is not essential for the activity.

## Target Elements

- \* applet
- \* canvas
- \* embed
- \* img
- \* object
- \* svg

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 2.2.2 Pause, Stop, Hide (Primary)  
(<https://www.w3.org/TR/WCAG21/#pause-stop-hide>)

## Additional Information

- \* How to meet 2.2.2 Pause, Stop, Hide (<https://www.w3.org/WAI/WCAG20/quickref/#qr-time-limits-pause>)

## **TIMING: Flashing limits**

### Summary

Flashing limits

### Definition

A page must not include content that flashes more than three times in one second, unless below general flash and red flash thresholds.

### Rule Scope Element

### Action

MC: Verify the page does not include content that flashes more than three times in one second, unless below general flash and red flash thresholds.

H: Message is missing for rule id: TIMING\_3 and message id: HIDDEN\_P

## Purpose

People who have photosensitive seizure disorders can have a seizure triggered by content that flashes at certain frequencies for more than a few flashes.

People are even more sensitive to red flashing than to other colors.

NOTE: This flashing requirements was adapted from the broadcasting industry standards (e.g. content is viewed from a closer distance and using a larger angle of vision).

#### Techniques

\* There is no remediation technique, the content must be removed or disabled from flashing.

#### Target Elements

- \* applet
- \* canvas
- \* embed
- \* img
- \* object \* svg

#### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 2.3.1 Three Flashes or Below Threshold (Primary)  
(<https://www.w3.org/TR/WCAG21/#three-flashes-or-below-threshold>)

#### Additional Information

- \* How to meet 2.3.1 Three Flashes or Below Threshold  
(<https://www.w3.org/WAI/WCAG20/quickref/#qr-seizure-does-not-violate>)

### **BYPASS: Skip to main content link**

#### Summary

Skip to main content link

#### Definition

Provide a keyboard-supported means of bypassing blocks of content, such as navigation menus and page headers, to get to the main content of the page.

#### Rule Scope Page

#### Action

MC: Verify that the first link on the page is a "skip to main content" link and that the target of the skip link is a focusable element.

#### Purpose

Most pages of websites typically have navigation menus, page headers and other repeated content before the main content of the page.

For keyboard-only and screen reader users, a link or other means of skipping these types of content blocks makes it easy to go directly to the main content of the page, without first having to tab through the repeated content.

## Techniques

- \* Make the first link on the page an internal link that references a valid target element at the beginning of the main content of the page.
- \* The ID attribute is preferred method to identify the target element for the "Skip to main content" link.
- \* To make any target element focusable, add `TABINDEX="-1"` to the element. If the target is an A element, adding `TABINDEX="-1"` will remove it from the tab order.
- \* If you use an `H1[ID="MAIN"]` element as the target of the "Skip to main content" link, most screen readers will read the heading level and content when the user activates the skip to link.
  - \* Use the "SkipTo" script, main and navigation landmarks and headings (H1-H2) to enable keyboard navigation from the "SkipTo" menu to all major sections of a page, including main content.
- \* The NAME attribute can be used if the target is an A element and is focusable (e.g. `tabindex` or non-empty HREF value), but this technique is discouraged, since the NAME attribute is being deprecated in HTML5.

## Target Elements

- \* a

## Compliance

WCAG Level A, Recommended

## WCAG Success Criteria

- \* Success Criterion 2.4.1 Bypass Blocks (Primary) (<https://www.w3.org/TR/WCAG21/#bypass-blocks>)
- \* Success Criterion 2.4.4 Link Purpose (In Context) (<https://www.w3.org/TR/WCAG21/#link-purpose-in-context>)

## Additional Information

- \* HTML 4.01 Specification: 12.2 The A element (<https://www.w3.org/TR/html4/struct/links.html#edef-A>)
- \* WAI-ARIA 1.0 Authoring Practices: Using Tabindex to Manage Focus among Widgets ([https://www.w3.org/TR/2013/WD-wai-aria-practices-20130307/#focus\\_tabindex](https://www.w3.org/TR/2013/WD-wai-aria-practices-20130307/#focus_tabindex))
- \* SkipTo plugin by PayPal Accessibility Team (<https://paypal.github.io/skipto/>)

## **TITLE: TITLE must identify website and page**

### Summary

TITLE must identify website and page

### Definition

TITLE element must identify both the website and page content.

### Rule Scope Page

### Action

MC: Verify that the TITLE element identifies both the website (if applicable) and the page content.

## Purpose

The TITLE element content can be accessed by assistive technologies to orient the user to the website and page content.

## Techniques

- \* Use a TITLE element to identify the website and page content.
- \* If the page is part of a sequence of web pages, include the sequence number and total number of steps in the TITLE element.

## Target Elements

- \* Page
- \* title

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 2.4.2 Page Titled (Primary) (<https://www.w3.org/TR/WCAG21/#page-titled>) \*
- Success Criterion 1.3.1 Info and Relationships (<https://www.w3.org/TR/WCAG21/#info-andrelationships>)
- \* Success Criterion 2.4.6 Headings and Labels (<https://www.w3.org/TR/WCAG21/#headings-and-labels>)

## Additional Information

- \* HTML TITLE Element Specification (<https://www.w3.org/TR/html4/struct/global.html#edefTITLE>)
- \* G88: Providing descriptive titles for Web pages (<https://www.w3.org/WAI/WCAG21/Techniques/general/G88>)
- \* H25: Providing a title using the title element (<https://www.w3.org/WAI/WCAG21/Techniques/html/H25>)

## **FOCUS: Focus order must be meaningful**

### Summary

Focus order must be meaningful

### Definition

The sequential focus order of links, form controls, embedded apps and widgets must be meaningful.

### Rule Scope Page

### Action

MC: Check the "tab" focus order of the page to make sure the sequence of focusable elements is meaningful.

H: The 67 links, form controls, embedded apps and/or widgets that are hidden do not need to be tested for focus order.

## Purpose

The "tab" key is the primary key many browsers use to navigate the interactive elements on a web page.

The sequential order of the elements receiving focus can help a user understand the features on a web page.

The usability of frequently used or important interactive features of a web page can be improved by moving them to the beginning of the focus sequence.

## Techniques

- \* Use document order to place related interactive items in a meaningful sequence. \* The TABINDEX attribute value (i.e. values greater than 0) can be used to change the sequence of focusable elements in a web page or make non-interactive elements part of the "tab" order of the page.
- \* A TABINDEX values of less than 0 remove redundant interactive elements from the sequential focus order.

## Target Elements

- \* Page
- \* a
- \* applet
- \* area
- \* button
- \* input
- \* object
- \* select
- \* area
- \* widgets

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 2.4.3 Focus Order (Primary) (<https://www.w3.org/TR/WCAG21/#focus-order>)
- \* Success Criterion 2.1.1 Keyboard (<https://www.w3.org/TR/WCAG21/#keyboard>)
- \* Success Criterion 2.1.2 No Keyboard Trap (<https://www.w3.org/TR/WCAG21/#no-keyboard-trap>)
- \* Success Criterion 2.4.7 Focus Visible (<https://www.w3.org/TR/WCAG21/#focus-visible>)
- \* Success Criterion 3.2.1 On Focus (<https://www.w3.org/TR/WCAG21/#on-focus>)

## Additional Information

- \* G59: Placing the interactive elements in an order that follows sequences and relationships within the content (<https://www.w3.org/WAI/WCAG21/Techniques/general/G59>)
- \* H4: Creating a logical tab order through links, form controls, and objects (<https://www.w3.org/WAI/WCAG21/Techniques/html/H4>)

**FOCUS: Target focus must be in content window**

## Summary

Target focus must be in content window

## Definition

The target of a link must result in focus the content the window if the target results in more than one window opening.

## Rule Scope Element

## Action

MC: Check the 25 links to make sure that if any of the links opens more than one window that the focus is in the content window.

H: The 67 link elements that are hidden do not need to be tested for content focus.

## Purpose

User's can become disoriented if the focus causes unpredictable actions, including new URLs and popup windows for advertisements or promotions.

## Techniques

- \* Do not link to URLs that open multiple windows and do not manage the focus to be in the content window the user was expecting by following the link.

## Target Elements

- \* a
- \* area
- \* select

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 3.2.1 On Focus (Primary) (<https://www.w3.org/TR/WCAG21/#on-focus>)
- \* Success Criterion 2.1.1 Keyboard (<https://www.w3.org/TR/WCAG21/#keyboard>)
- \* Success Criterion 2.1.2 No Keyboard Trap (<https://www.w3.org/TR/WCAG21/#no-keyboard-trap>)
- \* Success Criterion 2.4.3 Focus Order (<https://www.w3.org/TR/WCAG21/#focus-order>)
- \* Success Criterion 2.4.7 Focus Visible (<https://www.w3.org/TR/WCAG21/#focus-visible>)

## Additional Information

- \* G200: Opening new windows and tabs from a link only when necessary (<https://www.w3.org/WAI/WCAG21/Techniques/general/G200>)
- \* G201: Giving users advanced warning when opening a new window (<https://www.w3.org/WAI/WCAG21/Techniques/general/G201>)
- \* F52: Failure of Success Criterion 3.2.1 and 3.2.5 due to opening a new window as soon as a new page is loaded (<https://www.w3.org/WAI/WCAG21/Techniques/failures/F52>)

## **FOCUS: Forms submitted using buttons**

## Summary



## Forms submitted using buttons

### Definition

Forms must use INPUT[TYPE="SUBMIT"] or other form control buttons for submitting forms.

### Rule Scope Element

### Action

MC: Verify that each of the 2 forms has a button used to submit the form.

### Purpose

Using a submit button allows users to easily identify and control how to submit form information to a server for processing. Forms that are submitted through changes in focus or selection may result in users prematurely submitting the form or not being aware they submitted the form.

### Techniques

- \* The preferred technique for submitting forms is with the use of the input[type="submit"] form control.
- \* An alternative techniques include using other HTML form control elements, including INPUT[TYPE="BUTTON"], INPUT[TYPE="IMAGE"] or BUTTON elements with an accessible name indicating that the button is for submitting form information.
- \* In the case when a non-form control element (e.g. A or DIV element) is being used to submit the form, the element can use ARIA [role="button"] attribute with the accessible name indicating that the button is for submitting form information.

### Target Elements

- \* form
- \* input[type="submit"]
- \* input[type="button"]
- \* input[type="image"]
- \* button
- \* [role="button"]

### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 3.2.2 On Input (Primary) (<https://www.w3.org/TR/WCAG21/#on-input>)

### Additional Information

- \* HTML 4.01 Specification: The INPUT[TYPE="SUBMIT"] element (<https://www.w3.org/TR/html4/interact/forms.html#edef-INPUT>)
- \* H32: Providing submit buttons (<https://www.w3.org/TR/2014/NOTE-WCAG20-TECHS-20140408/H32>)

## **FOCUS: Focus must be visible**

### Summary

Focus must be visible

## Definition

The element with keyboard focus must have a visible focus style that is different from the nonfocus state.

## Rule Scope Page

## Action

MC: Use the "tab" key to move focus between links, form controls, embedded apps and widgets and check the visibility of focus styling for each element as it receives focus. H: The 67 links, form controls, embedded apps and/or widgets that are hidden do not need to be tested for focus order.

## Purpose

Many browsers don't provide a prominent or consistent visible keyboard focus styling for interactive elements, making it difficult for users to identify and track the element with keyboard focus.

Author defined visible keyboard focus style makes it easier for users to know which interactive element has keyboard focus and provides more consistent user experience between browsers and operating systems.

## Techniques

- \* Use CSS psuedo element selector :FOCUS to change the styling of elements with keyboard focus.
- \* Use FOCUS and BLUR event handlers on checkboxes and radio buttons to change the styling of not only the form control, but also its label text to make it easier to see.
- \* Styling changes should include creating a border around the interactive element and its label, typically using the CSS BORDER or OUTLINE properties.
- \* For consistent look and feel to the website it is often useful for the focus and hover styles to be the same or similar.

## Target Elements

- \* Page
- \* a
- \* applet
- \* area
- \* button
- \* input
- \* object
- \* select
- \* area
- \* widgets

## Compliance

WCAG Level AA, Required

## WCAG Success Criteria

- \* Success Criterion 2.4.7 Focus Visible (Primary) (<https://www.w3.org/TR/WCAG21/#focus-visible>)

- \* Success Criterion 2.1.1 Keyboard (<https://www.w3.org/TR/WCAG21/#keyboard>)
- \* Success Criterion 2.1.2 No Keyboard Trap (<https://www.w3.org/TR/WCAG21/#no-keyboard-trap>)
- \* Success Criterion 2.4.3 Focus Order (<https://www.w3.org/TR/WCAG21/#focus-order>)
- \* Success Criterion 3.2.1 On Focus (<https://www.w3.org/TR/WCAG21/#on-focus>)

#### Additional Information

- \* C15: Using CSS to change the presentation of a user interface component when it receives focus (<https://www.w3.org/TR/WCAG20-TECHS/C15>)
- \* G195: Using an author-supplied, highly visible focus indicator (<https://www.w3.org/WAI/WCAG21/Techniques/general/G195>)

## **RESIZE: Resize text content**

### Summary

Resize text content

### Definition

When the text of a page is resized the text content must reflow to fill available view and all text content should remain visible (e.g. text is not clipped by iframe sizes or CSS overflow limits).

### Rule Scope Element

### Action

MC: Resize the text using the zoom feature of the browser to check to make sure text content is visible (e.g. text is not clipped by iframe sizes or CSS overflow limits).

### Purpose

People with visual impairments may increase the size of text and the text should reflow to fit the available viewing area to make it easier to read.

If text is clipped by limits on iframe sizes or CSS overflow properties some text content will be impossible to view.

### Techniques

- \* Use relative CSS sized like EM and PERCENTAGE rather than pixels and point sizes. \* If using the CSS overflow property, IFRAME or FRAME check to make sure content reflows and is not clipped by changes in zoom levels.

### Target Elements

### Compliance

WCAG Level AA, Required

### WCAG Success Criteria

- \* Success Criterion 1.4.4 Resize text (Primary) (<https://www.w3.org/TR/WCAG21/#resize-text>)

### Additional Information

- \* How to meet 1.4.4 Resize Text (<https://www.w3.org/WAI/WCAG20/quickref/#qr-visual-audio-contrast-scale>)

## **NAVIGATION: At least two ways of finding content**

### Summary

At least two ways of finding content

### Definition

At least two of the following features must be provided for finding content in a website: a website search feature; a list of links on the home page to all pages in the website; a list of links on each page for navigation between pages; bread crumb links on each page for hierarchical navigation of the website and/or a dedicated page that serves as a site map of all the pages in the website.

### Rule Scope Website

### Action

MC: Verify that this page can be found from other pages in the website using at least two of the following features: a website search feature; a list of links for navigation from at least one other page in the website and/or from a page in the web site that serves as a site map.

### Purpose

One of the fundamental features of the web is the provision of easy access to useful information. By providing multiple ways to find information within a website, people with disabilities are able to locate content in a manner that best meets their needs.

### Techniques

- \* Website search feature identified by the SEARCH landmark.
- \* A list of links for navigation between pages using the NAVIGATION landmark.
- \* Sandtrail/bread crumb links for hierarchical navigation of the website using the NAVIGATION landmark.
- \* A dedicated page that serves as a site map of all the pages in the website.

### Target Elements

- \* Website
- \* role='search'
- \* role='navigation'

### Compliance

WCAG Level AA, Required

### WCAG Success Criteria

- \* Success Criterion 2.4.5 Multiple Ways (Primary) (<https://www.w3.org/TR/WCAG21/#multiple-ways>)

### Additional Information

- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: Landmark Roles ([https://www.w3.org/TR/wai-aria-1.2/#landmark\\_roles](https://www.w3.org/TR/wai-aria-1.2/#landmark_roles))
- \* G63: Providing a site map (<https://www.w3.org/WAI/WCAG21/Techniques/general/G63>)
- \* G64: Providing a Table of Contents (<https://www.w3.org/WAI/WCAG21/Techniques/general/G64>)

- \* G125: Providing links to navigate to related Web pages (<https://www.w3.org/WAI/WCAG21/Techniques/general/G125>)
- \* G126: Providing a list of links to all other Web pages (<https://www.w3.org/WAI/WCAG21/Techniques/general/G126>)
- \* G161: Providing a search function to help users find content (<https://www.w3.org/WAI/WCAG21/Techniques/general/G161>)
- \* G185: Linking to all of the pages on the site from the home page (<https://www.w3.org/WAI/WCAG21/Techniques/general/G185>)

## **NAVIGATION: Consistent ordering of H1 and H2 labels**

### Summary

Consistent ordering of H1 and H2 labels

### Definition

Consistent ordering of H1 and H2 elements that label recurring page sections common across all pages in a website.

### Rule Scope Website

### Action

MC: Verify that this page uses the same ordering of H1 and H2 elements used to mark recurring page sections as the ordering used on the other pages within the website.

### Purpose

One of the fundamental features of the web is the provision of easy access to useful information. Consistent ordering of H1 and H2 elements used to identify recurring page sections common across all pages in the website will make it easier for people to find information they are seeking and to navigate between and within pages.

### Techniques

- \* Use an H1 element to identify the main content within a page.
- \* Use H2 elements to identify other recurring page sections such as navigation bars, web site search forms, footer information, etc.

### Target Elements

- \* Website \* h2

### Compliance

WCAG Level AA, Required

### WCAG Success Criteria

- \* Success Criterion 3.2.3 Consistent Navigation (Primary) (<https://www.w3.org/TR/WCAG21/#consistent-navigation>)
- \* Success Criterion 3.2.4 Consistent Identification (<https://www.w3.org/TR/WCAG21/#consistent-identification>)

### Additional Information

\* Accessible Rich Internet Applications (WAI-ARIA) 1.2: Landmark Roles  
([https://www.w3.org/TR/wai-aria-1.2/#landmark\\_roles](https://www.w3.org/TR/wai-aria-1.2/#landmark_roles))

\* G61: Presenting repeated components in the same relative order each time they appear  
(<https://www.w3.org/WAI/WCAG21/Techniques/general/G61>)

## **NAVIGATION: Consistent H1 and H2 page section labels**

### Summary

Consistent H1 and H2 page section labels

### Definition

Consistent accessible names for H1 and H2 elements that identify recurring page sections common across all pages in a website.

### Rule Scope Website

### Action

MC: Verify that the accessible names of H1 and H2 elements used to identify recurring page sections are consistent with those on all other pages within the website.

### Purpose

One of the fundamental features of the web is the provision of easy access to useful information. Consistent accessible names of H1 and H2 elements used to identify recurring page sections common across all pages in the website will make it easier for people to find information they are seeking and to navigate between and within pages.

### Techniques

\* Use H1 elements to identify the main content within a page.

\* Use H2 elements to identify other major sections within pages, e.g. navigation bars, web site search forms, footer information, etc.

### Target Elements

\* Website \* h2

### Compliance

WCAG Level AA, Required

### WCAG Success Criteria

\* Success Criterion 3.2.4 Consistent Identification (Primary) (<https://www.w3.org/TR/WCAG21/#consistent-identification>)

\* Success Criterion 3.2.3 Consistent Navigation (<https://www.w3.org/TR/WCAG21/#consistent-navigation>)

### Additional Information

\* Accessible Rich Internet Applications (WAI-ARIA) 1.2: Landmark Roles  
([https://www.w3.org/TR/wai-aria-1.2/#landmark\\_roles](https://www.w3.org/TR/wai-aria-1.2/#landmark_roles))

\* G61: Presenting repeated components in the same relative order each time they appear  
(<https://www.w3.org/WAI/WCAG21/Techniques/general/G61>)

## **LANGUAGE: Identify language changes**

### Summary

Identify language changes

### Definition

Elements with text content in a different language from the principal language of the page must use the LANG attribute with a valid IANA language code to identify the change.

### Rule Scope Page

### Action

MC: Review the page for any text content that is different than the principal language of the page. If such content is found, use the LANG attribute on the appropriate container element to identify the language change.

### Purpose

Assistive technologies like screen readers and other speech output technologies need to know the language of the characters of an element to speak the text content correctly.

### Techniques

- \* Use the LANG attribute to define the IANA language of the text content of the element.
- \* Use the IANA codes to identify the language of the text in the element (e.g. en, fr, ...).

### Target Elements

- \* [lang]

### Compliance

WCAG Level AA, Required

### WCAG Success Criteria

- \* Success Criterion 3.1.2 Language of Parts (Primary) (<https://www.w3.org/TR/WCAG21/#language-of-parts>)
- \* Success Criterion 3.1.1 Language of Page (<https://www.w3.org/TR/WCAG21/#language-of-page>)

### Additional Information

- \* HTML4: Specifying the language of content: the lang attribute (<https://www.w3.org/TR/html4/struct/dirlang.html#edef-lang>)
- \* HTML5: The lang and xml:lang attributes (<https://www.w3.org/TR/html5/dom.html#the-lang-and-xml:lang-attributes>)
- \* W3C Internationalization: Language tags in HTML and XML (<https://www.w3.org/International/articles/language-tags/>)
- \* W3C Internationalization: Choosing a Language Tag (<https://www.w3.org/International/questions/qa-choosing-language-tags>)
- \* H58: Using language attributes to identify changes in the human language (<https://www.w3.org/WAI/WCAG21/Techniques/html/H58>)

## **ERROR: Information on invalid values**

## Summary

### Information on invalid values

## Definition

Form controls with invalid values must provide information to assistive technologies that the values are invalid.

## Rule Scope Element

## Action

MC: If the form control can be validated make sure it indicates invalid values when invalid.

## Purpose

Users must be able to identify form control values which are invalid in order to successfully correct the values and submit the form.

## Techniques

- \* Add the text "invalid" to the label of the form control, the text can be placed off screen using CSS.
- \* Add the image to the label. The image should be visible indicating an invalid value with the alt text 'invalid'.
- \* Use ARIA-INVALID attribute to indicate the form control is invalid.

## Target Elements

- \* `input[type="checkbox"]`
- \* `input[type="date"]`
- \* `input[type="file"]`
- \* `input[type="radio"]`
- \* `input[type="number"]`
- \* `input[type="password"]`
- \* `input[type="tel"]`
- \* `input[type="text"]`
- \* `input[type="url"]`
- \* `select`
- \* `textarea`
- \* `meter`
- \* `progress`

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 3.3.1 Error Identification (Primary)  
(<https://www.w3.org/TR/WCAG21/#erroridentification>)

## Additional Information

- \* HTML 4.01 Specification: The LABEL element (<https://www.w3.org/TR/html4/interact/forms.html#edef-LABEL>)



- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: aria-invalid (<https://www.w3.org/TR/wai-aria-1.2/#aria-invalid>)
- \* H44: Using label elements to associate text labels with form controls (<https://www.w3.org/WAI/WCAG21/Techniques/html/H44>)
- \* ARIA21: Using Aria-invalid to Indicate An Error Field (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA21>)

## **ERROR: Required form controls**

### Summary

Required form controls

### Definition

If user input is required for a form control the REQUIRED or ARIA-REQUIRED attribute must be used.

### Rule Scope Element

### Action

MC: If the form control is required, add the REQUIRED attribute or if HTML4 compatibility is required the ARIA-REQUIRED="TRUE" attribute.

### Purpose

Users benefit from information being informed if a input to a control is required for form submission or task completion.

### Techniques

- \* To identify a required form control, add the HTML5 REQUIRED attribute to the standard form controls.
- \* If compatibility with HTML4 standards or legacy browsers and assistive technologies, you can also use ARIA-REQUIRED="TRUE" to indicate a form control is required.
- \* Use the REQUIRED attribute (or the ARIA-REQUIRED if used) as the CSS selector for visually styling the form control as required. This ensures that the visual state stays synchronized with the accessibility API state used by assistive technologies.
- \* The only reason to support both REQUIRED and ARIA-REQUIRED on the same form control is to support legacy browsers and assistive technologies. This required extra care to make sure the two values do not conflict. If they do conflict the REQUIRED attribute will override the ARIA-REQUIRED property value.

### Target Elements

- \* `input[type="text"]`
- \* `input[type="date"]`
- \* `input[type="file"]`
- \* `input[type="number"]`
- \* `input[type="password"]`
- \* `input[type="tel"]`
- \* `input[type="text"]`
- \* `input[type="url"]`

- \* select
- \* textarea

#### Compliance

WCAG Level AA, Required

WCAG Success Criteria

- \* Success Criterion 3.3.3 Error Suggestion (Primary) (<https://www.w3.org/TR/WCAG21/#error-suggestion>)

#### Additional Information

- \* HTML5: required attribute (<https://www.w3.org/TR/html5/forms.html#attr-input-required>) \*
- Accessible Rich Internet Applications (WAI-ARIA) 1.2: aria-required (<https://www.w3.org/TR/wai-aria-1.2/#aria-required>)
- \* ARIA2: Identifying a required field with the aria-required property (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA2>)

### **ERROR: Error correction suggestions**

#### Summary

Error correction suggestions

#### Definition

When input error is automatically detected and suggestions are automatically known, the suggestions must be provided to the user (some exceptions).

#### Rule Scope Element

#### Action

MC: If the form control element or widget can automatically detect errors and suggest corrections, make sure that at least one accessible technique is used to present the suggestion to the user.

#### Purpose

Users benefit from being informed of invalid input and on how to correct invalid input.

#### Techniques

- \* Add ARIA-DESCRIBEDBY reference on the form control or widget to the suggestion information.
- \* Use a popup list to provide suggested values for valid input.

#### Target Elements

- \* input[type="text"]
- \* input[type="date"]
- \* input[type="file"]
- \* input[type="number"]
- \* input[type="password"]
- \* input[type="tel"]
- \* input[type="text"]

- \* input[type="url"]
- \* select
- \* textarea
- \* [role="textbox"]
- \* [role="combobox"]
- \* [role="gridcell"]

#### Compliance

WCAG Level AA, Required

#### WCAG Success Criteria

- \* Success Criterion 3.3.3 Error Suggestion (Primary) (<https://www.w3.org/TR/WCAG21/#error-suggestion>)

#### Additional Information

- \* HTML 4.01 Specification: The LABEL element (<https://www.w3.org/TR/html4/interact/forms.html#edef-LABEL>)
- \* Accessible Rich Internet Applications (WAI-ARIA) 1.2: aria-invalid (<https://www.w3.org/TR/wai-aria-1.2/#aria-invalid>)
- \* H44: Using label elements to associate text labels with form controls (<https://www.w3.org/WAI/WCAG21/Techniques/html/H44>)
- \* ARIA1: Using the aria-describedby property to provide a descriptive label for user interface controls (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA1>)
- \* ARIA19: Using ARIA role=alert or Live Regions to Identify Errors (<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA19>)

### **ERROR: Prevent errors**

#### Summary

Prevent errors

#### Definition

To prevent errors when input includes legal and/or financial transactions (e.g. online shopping, banking), the user must be able to either reverse, check or confirm the data before the transaction is finalized.

#### Rule Scope Page

#### Action

MC: If the 3 form controls and widgets on this page are used for legal and/or financial transactions, make sure the actions are either reversible or requires the user to confirm the information before the transaction is finalized.

#### Purpose

The intent of this rule is to help users with disabilities avoid serious consequences as the result of a mistake when performing an action that cannot be reversed. For example, purchasing nonrefundable airline tickets or submitting an order to purchase stock in a brokerage account are financial transactions with serious consequences.

## Techniques

- \* Provide a confirmation page showing all the user inputs before for final submission of the information for modification of user controlled data on a server.
- \* Provide a means for the user to review previous submissions and give them the ability to cancel or modify previous submissions of legal or financial information.
- \* Use a confirmation checkbox in addition to the submit button, to require the user to confirm the data is valid before submission.

## Target Elements

- \* `input[type="text"]`
- \* `input[type="date"]`
- \* `input[type="file"]`
- \* `input[type="number"]`
- \* `input[type="password"]`
- \* `input[type="tel"]`
- \* `input[type="text"]`
- \* `input[type="url"]`
- \* `select`
- \* `textarea`
- \* `[role="textbox"]`
- \* `[role="combobox"]`
- \* `[role="gridcell"]`

## Compliance

WCAG Level AA, Required

## WCAG Success Criteria

- \* Success Criterion 3.3.4 Error Prevention (Legal, Financial, Data) (Primary)  
(<https://www.w3.org/TR/WCAG21/#error-prevention-legal-financial-data>)

## Additional Information

- \* Understanding SC 3.3.4 Error Prevention (Legal, Financial, Data.) (<https://www.w3.org/TR/UNDERSTANDING-WCAG20/minimize-error-reversible.html>)
- \* G164: Providing a stated time within which an online request (or transaction) may be amended or canceled by the user after making the request. (<https://www.w3.org/WAI/WCAG21/Techniques/general/G164>)
- \* G98: Providing the ability for the user to review and correct answers before submitting. (<https://www.w3.org/WAI/WCAG21/Techniques/general/G98>)
- \* G155: Providing a checkbox in addition to a submit button. (<https://www.w3.org/WAI/WCAG21/Techniques/general/G155>)
- \* G99: Providing the ability to recover deleted information. (<https://www.w3.org/WAI/WCAG21/Techniques/general/G99>)
- \* G168: Requesting confirmation to continue with selected action. (<https://www.w3.org/WAI/WCAG21/Techniques/general/G168>)
- \* G155: Providing a checkbox in addition to a submit button. (<https://www.w3.org/WAI/WCAG21/Techniques/general/G155>)
- \* G98: Providing the ability for the user to review and correct answers before submitting.

(<https://www.w3.org/WAI/WCAG21/Techniques/general/G98>)

\* G168: Requesting confirmation to continue with selected action. (<https://www.w3.org/WAI/WCAG21/Techniques/general/G168>)

## **VIDEO: VIDEO for video only must have alternative**

### Summary

VIDEO for video only must have alternative

### Definition

VIDEO elements used for prerecorded video only content must have text or audio description of the video content.

### Rule Scope Element

### Action

MC: Verify if any of the 9 VIDEO elements with the ARIA-DESCRIBEDBY attributes are used for video only content. If so, verify the text description reference using the ARIA-DESCRIBEDBY describes the video only content.

### Purpose

Text and audio descriptions provide a means for people who cannot see the video to understand the video content.

Some types of learning disabilities affect visual processing, text and audio descriptions provide an alternative way to understand the video content.

### Techniques

- \* Use the TRACK element to add audio descriptions to the video content.
- \* Use ARIA-DESCRIBEDBY to reference a text description of the video content.
- \* Include an audio sound track that describes the video content.

### Target Elements

\* video \* track

### Compliance

WCAG Level A, Required

### WCAG Success Criteria

- \* Success Criterion 1.2.1 Audio-only and Video-only (Prerecorded) (Primary) (<https://www.w3.org/TR/WCAG21/#audio-only-and-video-only-prerecorded>)
- \* Success Criterion 1.2.2 Captions (Prerecorded) (<https://www.w3.org/TR/WCAG21/#captions-prerecorded>)
- \* Success Criterion 1.2.4 Captions (Live) (<https://www.w3.org/TR/WCAG21/#captions-live>)

### Additional Information

- \* HTML 5: The video element (<https://www.w3.org/TR/html5/embedded-content-0.html#the-video-element>)
- \* HTML 5: The track element (<https://www.w3.org/TR/html5/embedded-content-0.html#the-track-element>)

- \* Accessible Rich Internet Applications (ARIA) 1.0: aria-describedby (<https://www.w3.org/TR/wai-aria-1.2/#aria-describedby>)
- \* University of Washington: Creating Accessible Videos (<https://www.washington.edu/accessibility/videos/>)
- \* WebAIM: Captions, Transcripts, and Audio Descriptions (<https://webaim.org/techniques/captions/>)

## **VIDEO: VIDEO must have caption**

### Summary

VIDEO must have caption

### Definition

Live and prerecorded video with synchronized audio (i.e. a movie, lecture) using the VIDEO element must have synchronized captions.

### Rule Scope

Element

## Action

MC: Verify that the 9 VIDEO elements without caption tracks have open captions.

### Purpose

Synchronized captions provide a means for people who cannot hear the audio content of a video to understand the audio content of the video.

Some types of learning disabilities affect auditory processing, captions provide an alternative way to understand the audio content of a video.

This rule covers the requirements of both WCAG 2.0 Success Criteria 1.2.2 and 1.2.4, and therefore covers both live and prerecorded video content.

### Techniques

- \* Use the TRACK element to add a caption track to the video content.
- \* Use open captions to include the captions as part of the video.
- \* If closed captions are not supported, use open captioning to include captions as part of the video.
- \* Open captioning is the only way to insure that captions are available on most cell phones and tablet computers connecting through wireless services.

### Target Elements

\* video \* track

### Compliance

WCAG Level A, Required

### WCAG Success Criteria

- \* Success Criterion 1.2.2 Captions (Prerecorded) (Primary)  
(<https://www.w3.org/TR/WCAG21/#captions-prerecorded>)
- \* Success Criterion 1.2.4 Captions (Live) (<https://www.w3.org/TR/WCAG21/#captions-live>)

### Additional Information

- \* HTML 5: The video element (<https://www.w3.org/TR/html5/embedded-content-0.html#the-video-element>)
- \* HTML 5: The track element (<https://www.w3.org/TR/html5/embedded-content-0.html#the-track-element>)
- \* University of Washington: Creating Accessible Videos  
(<https://www.washington.edu/accessibility/videos/>)
- \* WebAIM: Captions, Transcripts, and Audio Descriptions  
(<https://webaim.org/techniques/captions/>)

**VIDEO: VIDEO element must have audio description.**

### Summary

VIDEO element must have audio description.

## Action

### Definition

VIDEO elements used for prerecorded video with synchronized audio (i.e. a movie, archived lecture) must have an audio description of the video content.

### Rule Scope

#### Element

MC: Verify if any of the 9 VIDEO elements are used for prerecorded video with synchronized audio. If so, verify each of the videos includes an audio description of the video content.

#### Purpose

Text and audio descriptions provide a means for people who cannot see the video to understand the video content.

Some types of learning disabilities affect visual processing, text and audio descriptions provide an alternative way to understand the video content.

This rule covers the requirements of both WCAG 2.0 Success Criteria 1.2.3 and 1.2.5, that is why a text description of the video content cannot be used to satisfy this rule.

#### Techniques

- \* Use the TRACK element to add audio descriptions to the video content.
- \* Use ARIA-DESCRIBEDBY to reference a text description of the video content.

#### Target Elements

\* video \* track

#### Compliance

WCAG Level A, Required

#### WCAG Success Criteria

- \* Success Criterion 1.2.3 Audio Description or Media Alternative (Prerecorded) (Primary) (<https://www.w3.org/TR/WCAG21/#audio-description-or-media-alternative-prerecorded>)
- \* Success Criterion 1.2.5 Audio Description (Prerecorded) (<https://www.w3.org/TR/WCAG21/#audio-description-prerecorded>)

#### Additional Information

- \* HTML 5: The video element (<https://www.w3.org/TR/html5/embedded-content-0.html#the-video-element>)
- \* HTML 5: The track element (<https://www.w3.org/TR/html5/embedded-content-0.html#the-track-element>)
- \* Accessible Rich Internet Applications (ARIA) 1.0: aria-describedby (<https://www.w3.org/TR/wai-aria-1.2/#aria-describedby>)
- \* University of Washington: Creating Accessible Videos (<https://www.washington.edu/accessibility/videos/>)
- \* WebAIM: Captions, Transcripts, and Audio Descriptions (<https://webaim.org/techniques/captions/>)



## **KEYBOARD: Interactive functionality must be keyboard operable**

### Summary

Interactive functionality must be keyboard operable

### Definition

All functionality provided by the interactive elements on the page must be operable through the keyboard interface.

### Rule Scope

#### Page

MC: Verify that the functionality provided by the 10 links, form controls, elements with event handlers and/or embedded applications is operable through the keyboard.

H: 65 hidden links, form controls, elements with event handlers, OBJECT and/or APPLET elements were not evaluated.

### Purpose

Many users are unable to use the mouse, either because of visual impairments, which make it difficult or impossible for them to see the pointer, or motor skill impairments, which prevent them from being able to accurately position the mouse pointer.

This requirement is not intended to discourage support for mouse behaviors, but rather to make sure there is an equivalent way of using the keyboard for all interactive tasks that can be performed using the mouse.

The recommended and most efficient way to include keyboard support for interactive elements is to follow computing platform conventions. This will make it easier for all users to benefit from keyboard support, since the keystrokes and shortcuts will be easier to discover and familiar to the greatest number of users.

Touch typists often prefer keyboard commands over mouse actions, especially for frequently performed operations, since they are much more efficient from a hand motion perspective.

### Techniques

- \* Use the WAI-ARIA 1.0 Authoring Practices to determine the keyboard support that is appropriate for common widget types.
- \* Use keyboard event handlers to implement keyboard support for interactive behaviors defined on the page.
- \* Avoid using OBJECT and EMBED elements due to the difficulty in providing the corresponding keyboard support for all of their inherent interactive behaviors.
- \* Avoid using TABINDEX values greater than 0 to change tabbing order, since tabbing behavior is inconsistent and therefore unpredictable across web browsers.

### Target Elements

- \* Page
- \* applet \* object
- \* widgets

### Compliance

WCAG Level A, Required

## Action

### WCAG Success Criteria

- \* Success Criterion 2.1.1 Keyboard (Primary) (<https://www.w3.org/TR/WCAG21/#keyboard>) \*
- Success Criterion 2.1.2 No Keyboard Trap (<https://www.w3.org/TR/WCAG21/#no-keyboardtrap>)
- \* Success Criterion 2.4.3 Focus Order (<https://www.w3.org/TR/WCAG21/#focus-order>)
- \* Success Criterion 2.4.7 Focus Visible (<https://www.w3.org/TR/WCAG21/#focus-visible>)
- \* Success Criterion 3.2.1 On Focus (<https://www.w3.org/TR/WCAG21/#on-focus>)

### Additional Information

- \* WAI-ARIA 1.0 Authoring Practices (<https://www.w3.org/WAI/PF/aria-practices/>)
- \* OAA Web Accessibility ARIA Examples (<https://oaa-accessibility.org/examples/>)
- \* Accessible jQuery-ui Components Demonstration (<https://access.aol.com/aegis/>)

### **KEYBOARD: No keyboard trap**

## Summary

No keyboard trap

## Definition

OBJECT and APPLET elements must not trap the keyboard.

## Rule Scope Element

## Action

MC: Verify the 9 embedded applications to make sure application does not trap the keyboard.

## Purpose

If an embedded application (i.e. OBJECT or APPLET element) traps the keyboard, keyboard users will not be able to use the web page.

## Techniques

- \* Use TABINDEX="-1" on the element to remove it from "tab" order of the page.
- \* If the embedded application does support accessibility, use a button to move focus to the application.

## Target Elements

- \* object
- \* applet

## Compliance

WCAG Level A, Required

## WCAG Success Criteria

- \* Success Criterion 2.1.2 No Keyboard Trap (Primary) (<https://www.w3.org/TR/WCAG21/#no-keyboard-trap>)
- \* Success Criterion 2.1.1 Keyboard (<https://www.w3.org/TR/WCAG21/#keyboard>)
- \* Success Criterion 2.4.3 Focus Order (<https://www.w3.org/TR/WCAG21/#focus-order>)
- \* Success Criterion 2.4.7 Focus Visible (<https://www.w3.org/TR/WCAG21/#focus-visible>)
- \* Success Criterion 3.2.1 On Focus (<https://www.w3.org/TR/WCAG21/#on-focus>)

## Additional Information

- \* G108: Using markup features to expose the name and role, allow user-settable properties to be directly set, and provide notification of changes (<https://www.w3.org/WAI/WCAG21/Techniques/general/G108>)
- \* OAA Web Accessibility ARIA Examples (<https://oaa-accessibility.org/examples/>)