List of Checkpoints for User Agent Accessibility Guidelines 1.0

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Abstract

This document is an appendix to "User Agent Accessibility Guidelines 1.0" *[UAAG10]* . It provides a list of all checkpoints from the User Agent Accessibility Guidelines 1.0, organized by concept, as a checklist for user agent developers. Please refer to the Guidelines document for introductory information, information about related documents, a glossary of terms, and more.

This list may be used to review a tool or set of tools for accessibility. For each checkpoint, indicate whether the checkpoint has been satisfied, has not been satisfied, or is not applicable.

A tabular version of the list of checkpoints is also available (e.g., for printing).

Status of this document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. The latest status of this document series is maintained at the W3C.

This document is an appendix to a Working Draft. It is a draft document and may be updated, replaced or obsoleted by other documents at any time. It is inappropriate to use W3C Working Drafts as reference material or to cite them as other than "work in progress". This is work in progress and does not imply

endorsement by, or the consensus of, W3C Members.

Please send comments about this document to the public mailing list w3c-wai-ua@w3.org; public archives are available.

This document has been produced as part of the Web Accessibility Initiative. WAI Accessibility Guidelines are produced as part of the WAI Technical Activity. The goal of the WAI User Agent Accessibility Guidelines Working Group is discussed in the Working Group charter.

A list of current W3C Recommendations and other technical documents can be found at the W3C Web site.

Priorities

Each checkpoint in this document is assigned a priority that indicates its importance for users with disabilities.

[Priority 1]
: This checkpoint **must** be satisfied by user agents, otherwise one or more groups of users with disabilities will find it impossible to access the Web. Satisfying this checkpoint is a basic requirement for enabling some people to access the Web.

[Priority 2]
: This checkpoint **should** be satisfied by user agents, otherwise one or more groups of users with disabilities will find it difficult to access the Web. Satisfying this checkpoint will remove significant barriers to Web access for some people.

[Priority 3]
: This checkpoint **may** be satisfied by user agents to make it easier for one or more groups of users with disabilities to access information. Satisfying this checkpoint will improve access to the Web for some people.

Priority 1 checkpoints

- Checkpoint 1.1 Ensure that the user can operate the user agent fully through keyboard input alone. Both
- Checkpoint 1.2 For the element with content focus, allow the user to activate any explicitly associated input device event handlers through keyboard input alone. Content only
- Checkpoint 1.3 Ensure that every message (e.g., prompt, alert, notification, etc.) that is a non-text element and is part of the user agent user interface has a text equivalent. User agent only
- Checkpoint 2.1 For all format specifications that the user agent implements, make content available through the rendering processes described by those specifications. Content only
- Checkpoint 2.2 For all text formats that the user agent implements, provide a view of the text source. Text formats include at least the following: (1) all media

objects given an Internet media type of "text" (e.g., text/plain, text/HTML, or text/*), and (2) all SGML and XML applications, regardless of Internet media type (e.g., HTML 4.01, XHTML 1.1, SMIL, SVG, etc.). Content only

- Checkpoint 2.3 global configuration so that, for each piece of unrendered conditional content "C", the user agent alerts the user to the existence of the content and provides access to it. Provide access to this content according to format specifications or where unspecified, as follows. If C has a close relationship (e.g., C is a summary, title, alternative, description, expansion, etc.) with another piece of rendered content D, do at least one of the following: (1a) render C in place of D, (2a) render C in addition to D, (3a) provide access to C by querying D, or (4a) allow the user to follow a link to C from the context of D. If C does not have a close relationship to other content (i.e., a relationship other than just a document tree relationship), do at least one of the following: (1b) render a placeholder for C, (2b) provide access to C by query (e.g., allow the user to query an element for its attributes), or (3b) allow the user to follow a link in context to C. Content only
- Checkpoint 2.4 For content where user input is only possible within a finite time interval controlled by the user agent, allow configuration to make the time interval "infinite". Do this by pausing automatically at the end of each time interval where user input is possible, and resuming automatically after the user has explicitly completed input. In this configuration, alert the user when the session has been paused and which enabled elements are time-sensitive. Content only
- Checkpoint 2.5 Allow configuration or control so that text transcripts, collated text transcripts, captions, and auditory descriptions are rendered at the same time as the associated audio tracks and visual tracks. Content only
  Labels: Video, Audio
- Checkpoint 2.6 Respect synchronization cues during rendering. Content only
  Labels: Video, Audio
- Checkpoint 3.1 Allow configuration not to render background images. In this configuration, provide an option to alert the user when a background image is available (but has not been rendered). Content only
  Labels: Image
- Checkpoint 3.2 Allow configuration not to render audio, video, or animated images except on explicit request from the user. In this configuration, provide an option to render a placeholder in context for each unrendered source of audio, video, or animated image. When placeholders are rendered, allow the user to view the original author-supplied content associated with each placeholder. Content only
  Labels: Animation, Video, Audio
- Checkpoint 3.3 Allow configuration to render animated or blinking text as motionless, unblinking text. Content only
  Labels: VisualText
- Checkpoint 3.4 Allow configuration not to execute any executable content (e.g., scripts and applets). In this configuration, provide an option to alert the user when executable content is available (but has not been executed). Content only

- Checkpoint 3.5 Allow configuration so that client-side content refreshes (i.e., those initiated by the user agent, not the server) do not change content except on explicit user request. Allow the user to request the new content on demand (e.g., by following a link or confirming a prompt). Alert the user, according to the schedule specified by the author, whenever fresh content is available (to be obtained on explicit user request). Content only
  Labels: Image
- Checkpoint 4.1 Allow global configuration and control over the reference size of rendered text, with an option to override reference sizes specified by the author or user agent defaults. Allow the user to choose from among the full range of font sizes supported by the operating environment. Content only
  Labels: VisualText
- Checkpoint 4.2 Allow global configuration of the font family of all rendered text, with an option to override font families specified by the author or by user agent defaults. Allow the user to choose from among the full range of font families supported by the operating environment. Content only
  Labels: VisualText
- Checkpoint 4.3 Allow global configuration of the foreground and background color of all rendered text, with an option to override foreground and background colors specified by the author or user agent defaults. Allow the user to choose from among the full range of colors supported by the operating environment. Content only
  Labels: ColorText
- Checkpoint 4.4 Allow the user to slow the presentation rate of audio and animations (including video and animated images). For a visual track, provide at least one setting between 40% and 60% of the original speed. For a prerecorded audio track including audio-only presentations, provide at least one setting between 75% and 80% of the original speed. When the user agent allows the user to slow the visual track of a synchronized multimedia presentation to between 100% and 80% of its original speed, synchronize the visual and audio tracks. Below 80%, the user agent is not required to render the audio track. The user agent is not required to satisfy this checkpoint for audio and animations whose recognized role is to create a purely stylistic effect. Content only
  Labels: Animation, Audio
- Checkpoint 4.5 Allow the user to stop, pause, resume, fast advance, and fast reverse audio and animations (including video and animated images) that last three or more seconds at their default playback rate. The user agent is not required to satisfy this checkpoint for audio and animations whose recognized role is to create a purely stylistic effect. The user agent is not required to play synchronized audio during fast advance or reverse of animations (though doing so may help orient the user). Content only
  Labels: Animation, Audio
- Checkpoint 4.6 For graphical viewports, allow the user to position text transcripts, collated text transcripts, and captions in the viewport. Allow the user to choose from among at least the range of positions available to the author

(e.g., the range of positions allowed by the markup or style language). Content only
Labels: Animation, Audio

- Checkpoint 4.9 Allow global configuration and control of the volume of all audio, with an option to override audio volumes specified by the author or user agent defaults. The user must be able to choose zero volume (i.e., silent). Content only
  Labels: Audio
- Checkpoint 4.10 Allow independent control of the volumes of distinct audio sources synchronized to play simultaneously. Content only
  Labels: Audio
- Checkpoint 4.11 Allow configuration and control of the synthesized speech rate, according to the full range offered by the speech synthesizer. Content only
  Labels: Speech
- Checkpoint 4.12 Allow control of the synthesized speech volume, independent of other sources of audio. Content only
  Labels: Speech
- Checkpoint 4.13 Allow configuration of speech characteristics according to the full range of values offered by the speech synthesizer. Content only
- Checkpoint 4.16 For user agents that support style sheets, allow the user to choose from (and apply) available author and user style sheets or to ignore them. Both
- Checkpoint 6.1 Provide programmatic read access to HTML and XML content by conforming to the following modules of the W3C Document Object Model DOM Level 2 Core Specification *[DOM2CORE]* and exporting the interfaces they define: (1) the Core module for HTML; (2) the Core and XML modules for XML. Content only
- Checkpoint 6.2 If the user can modify HTML and XML content through the user interface, provide the same functionality programmatically by conforming to the following modules of the W3C Document Object Model DOM Level 2 Core Specification *[DOM2CORE]* and exporting the interfaces they define: (1) the Core module for HTML; (2) the Core and XML modules for XML. Content only
- Checkpoint 6.3 For markup languages other than HTML and XML, provide programmatic access to content using standard APIs (e.g., platform-independent APIs and standard APIs for the operating environment). If standard APIs do not exist, provide programmatic access through publicly documented APIs. Content only
- Checkpoint 6.4 Provide programmatic read and write access to user agent user interface controls using standard APIs. If standard APIs do not exist, provide programmatic access through publicly documented APIs. User agent only
- Checkpoint 6.5 Using standard APIs, provide programmatic alert of changes to content, user interface controls, selection, content focus, and user interface focus. If standard APIs do not exist, provide programmatic alert through publicly documented APIs. Both
- Checkpoint 6.6 Implement standard accessibility APIs (e.g., of the operating environment). Where these APIs do not enable the user agent to satisfy the

requirements of this document, use the standard input and output APIs of the operating environment. Both

- Checkpoint 6.7 Implement the operating environment's standard APIs for the keyboard. If standard APIs for the keyboard do not exist, implement publicly documented APIs for the keyboard. User agent only
- Checkpoint 6.8 For an API implemented to satisfy requirements of this document, support the character encodings required for that API. Both
- Checkpoint 7.1 Follow operating environment conventions that benefit accessibility when implementing the selection, content focus, and user interface focus. User agent only
- Checkpoint 7.2 Ensure that default input configurations do not interfere with operating environment accessibility conventions. User agent only
- Checkpoint 8.1 Implement the accessibility features of all implemented specifications (markup languages, style sheet languages, metadata languages, graphics formats, etc.). The accessibility features of a specification are those identified as such and those that satisfy *all* of the requirements of the "Web Content Accessibility Guidelines 1.0" *[WCAG10]* . Content only
- Checkpoint 9.1 Allow the user to make the selection and focus of each viewport (including frames) the current selection and current focus, respectively. User agent only
- Checkpoint 9.2 Allow the user to move the content focus to any enabled element in the viewport. If the author has not specified a navigation order, allow at least forward sequential navigation to each element, in document order. The user agent may also include disabled elements in the navigation order. Content only
- Checkpoint 9.3 For each state in a viewport's browsing history, maintain information about the point of regard, content focus, user interface focus, and selection. When the user returns to any state in the viewport history, restore the saved values for all four of these state variables. User agent only
- Checkpoint 10.1 Make available to the user the purpose of each table and the relationships among the table cells and headers. Content only
- Checkpoint 10.2 Provide a mechanism for highlighting the selection and content focus. Allow the user to configure the highlight styles. The highlight mechanism must not rely on color alone. For graphical viewports, if the highlight mechanism involves colors or text decorations, allow the user to choose from among the full range of colors or text decorations supported by the operating environment. Content only
- Checkpoint 10.3 Ensure that all of the default highlight styles for the selection, content focus, enabled elements, recently visited links, and fee links (1) do not rely on color alone, and (2) differ from each other, and not by color alone. Content only
- Checkpoint 10.7 Provide a mechanism for highlighting the viewport with the current focus. For graphical viewports, the default highlight mechanism must not rely on color alone. User agent only
- Checkpoint 11.1 Provide information to the user about current user preferences

for input configurations. User agent only
- Checkpoint 12.1 Ensure that at least one version of the product documentation conforms to at least Level Double-A of the Web Content Accessibility Guidelines 1.0 *[WCAG10]* . User agent only
- Checkpoint 12.2 Document all user agent features that benefit accessibility. User agent only
- Checkpoint 12.3 Document the default input configuration (e.g., the default keyboard bindings). User agent only

Priority 2 checkpoints

- Checkpoint 2.7 Allow configuration to generate repair text when the user agent recognizes that the author has failed to provide conditional content that was required by the format specification. The user agent may satisfy this checkpoint by basing the repair text on any of the following available sources of information: URI reference, content type, or element type. Content only
- Checkpoint 3.6 Allow configuration so that a "client-side redirect" (i.e., one initiated by the user agent, not the server) does not change content except on explicit user request. Allow the user to access the new content on demand (e.g., by following a link or confirming a prompt). The user agent is not required to provide these functionalities for client-side redirects that occur instantaneously (i.e., when there is no delay before the new content is retrieved). Content only
- Checkpoint 3.7 Allow configuration not to render images. In this configuration, provide an option to render a placeholder in context for each unrendered image. When placeholders are rendered, allow the user to view the original author-supplied content associated with each placeholder. Content only
- Checkpoint 4.7 Allow the user to slow the presentation rate of audio and animations (including video and animated images) not covered by checkpoint 4.4. The same speed percentage requirements of checkpoint 4.4 apply. Content only
- Checkpoint 4.8 Allow the user to stop, pause, resume, fast advance, and fast reverse audio and animations (including video and animated images) not covered by checkpoint 4.5. Content only
  Labels: Animation, Audio
- Checkpoint 4.14 Allow configuration of the following speech characteristics: pitch, pitch range, stress, richness. Pitch refers to the average frequency of the speaking voice. Pitch range specifies a variation in average frequency. Stress refers to the height of "local peaks" in the intonation contour of the voice. Richness refers to the richness or brightness of the voice. Content only
- Checkpoint 4.15 Provide support for user-defined extensions to the speech dictionary, as well as the following functionalities: spell-out (spell text one character at a time or according to language-dependent pronunciation rules), speak-numeral (speak a numeral as individual digits or as a full number), and speak-punctuation (speak punctuation literally or render as natural pauses). Content only

- Checkpoint 5.1 Allow configuration so that the current focus does not move automatically to viewports that open without explicit user request. Configuration is not required if the current focus can only ever be moved by explicit user request. Both
- Checkpoint 5.2 For graphical user interfaces, allow configuration so that the viewport with the current focus remains "on top" of all other viewports with which it overlaps. Both
- Checkpoint 5.3 Allow configuration so that viewports only open on explicit user request. In this configuration, instead of opening a viewport automatically, alert the user and allow the user to open it on demand (e.g., by following a link or confirming a prompt). Allow the user to close viewports. If a viewport (e.g., a frame set) contains other viewports, these requirements only apply to the outermost container viewport. Both
- Checkpoint 5.4 Allow configuration to prompt the user to confirm (or cancel) any form submission that is not caused by an explicit user request to activate a form submit control. Content only
- Checkpoint 5.5 Allow configuration to prompt the user to confirm (or cancel) any payment that results from activation of a fee link. Content only
- Checkpoint 6.9 For user agents that implement Cascading Style Sheets (CSS), provide programmatic access to those style sheets by conforming to the CSS module of the W3C Document Object Model (DOM) Level 2 Style Specification *[DOM2STYLE]* and exporting the interfaces it defines. Content only
- Checkpoint 6.10 Ensure that programmatic exchanges proceed in a timely manner. Both
- Checkpoint 7.3 Follow operating environment conventions that benefit accessibility. In particular, follow conventions that benefit accessibility for user interface design, keyboard configuration, product installation, and documentation. User agent only
- Checkpoint 7.4 Follow operating environment conventions to indicate the input configuration. User agent only
- Checkpoint 8.2 Use and conform to either (1) W3C Recommendations when they are available and appropriate for a task, or (2) non-W3C specifications that enable the creation of content that conforms to the Web Content Accessibility Guidelines 1.0 *[WCAG10]* at any conformance level. Content only
- Checkpoint 9.4 For the element with content focus, make available the list of input device event handlers explicitly associated with the element. Content only
- Checkpoint 9.5 Allow configuration so that moving the content focus to an enabled element does not automatically activate any explicitly associated input device event handlers. Content only
- Checkpoint 9.6 Allow the user to move the content focus to any enabled element in the viewport. If the author has not specified a navigation order, allow at least forward and reverse sequential navigation to each element, in document order. The user agent must not include disabled elements in the navigation order. Content only
- Checkpoint 9.7 Allow the user to search within rendered text content for a

sequence of characters from the document character set. Allow the user to start a forward search (in document order) from any selected or focused location in content. When there is a match (1) move the viewport so that the matched text content is within it, and (2) allow the user to search for the next instance of the text from the location of the match. Alert the user when there is no match, when the search reaches the end of content, and prior to any wrapping. Provide a case-insensitive search option for text in scripts (i.e., writing systems) where case is significant. Content only

- Checkpoint 9.8 Allow the user to navigate efficiently to and among important structural elements. Allow forward and backward sequential navigation to important structural elements. Content only
- Checkpoint 10.4 Provide a mechanism for highlighting all enabled elements, recently visited links, and fee links. Allow the user to configure the highlight styles. The highlight mechanism must not rely on color alone. For graphical viewports, if the highlight mechanism involves colors, fonts, or text decorations, allow the user to choose from among the full range of colors, fonts, or text decorations supported by the operating environment. For an image map, the user agent must highlight the image map as a whole and should allow configuration to highlight each enabled region. Content only
- Checkpoint 10.5 Make available to the user an "outline" view of content, composed of labels for important structural elements (e.g., heading text, table titles, form titles, etc.). Content only
- Checkpoint 10.8 Ensure that when a viewport's selection or content focus changes, it is in the viewport after the change. User agent only
- Checkpoint 11.2 Provide a centralized view of the current author-specified input configuration bindings. Content only
- Checkpoint 11.3 Allow the user to override any binding that is part of the user agent default input configuration The user agent is not required to allow the user to override standard bindings for the operating environment (e.g., for access to help). User agent only
- Checkpoint 11.4 Allow the user to override any binding in the default keyboard configuration with a binding to either a key plus modifier keys or to a single-key. For each functionality in the set required by checkpoint 11.5, allow the user to configure a single-key binding (i.e., one key press performs the task, with zero modifier keys). If the number of physical keys on the keyboard is less than the number of functionalities required by by checkpoint 11.5, allow single-key bindings for as many of those functionalities as possible. The user agent is not required to allow the user to override standard bindings for the operating environment (e.g., for access to help). User agent only
- Checkpoint 11.5 Ensure that the default input configuration includes bindings for the following functionalities required by other checkpoints in this document: move focus to next enabled element; move focus to previous enabled element; activate focused link; search for text; search again for same text; increase size of rendered text; decrease size of rendered text; increase global volume; decrease global volume; (each of) stop, pause, resume, fast advance, and fast reverse selected audio and animations (including video and animated images).

If the user agent supports the following functionalities, the default input configuration must also include bindings for them: next history state (forward); previous history state (back); enter URI for new resource; add to favorites (i.e., bookmarked resources); view favorites; stop loading resource; reload resource; refresh rendering; forward one viewport; back one viewport; next line; previous line. User agent only

- Checkpoint 11.6 For the configuration requirements of this document, allow the user to save user preferences in at least one user profile. Allow users to choose from among available profiles or no profile (i.e., the user agent default settings). User agent only
- Checkpoint 12.4 In a dedicated section of the documentation, describe all features of the user agent that benefit accessibility. User agent only
- Checkpoint 12.5 In each software release, document all changes that affect accessibility. User agent only

Priority 3 checkpoints

- Checkpoint 2.8 Allow configuration so that when the user agent recognizes that conditional content required by the format specification is present but empty (e.g., the empty string), the user agent either (1) generates no repair text, or (2) generates repair text as described in checkpoint 2.7. Content only
- Checkpoint 2.9 Allow configuration to render all conditional content automatically. Provide access to this content according to format specifications or where unspecified, by applying one of the following techniques described in checkpoint 2.3: 1a, 2a, or 1b. Content only
- Checkpoint 2.10 Allow configuration not to render content in unsupported natural languages. Indicate to the user in context that author-supplied content has not been rendered. Content only
- Checkpoint 3.8 Once the user has viewed the original author-supplied content associated with a placeholder, allow the user to turn off the rendering of the author-supplied content. Content only
  Labels: Animation, Video, Image, Audio
- Checkpoint 5.6 Allow configuration to prompt the user to confirm (or cancel) closing any viewport that starts to close without explicit user request. Both
- Checkpoint 9.9 Allow configuration and control of the set of important elements required by checkpoint 9.8 and checkpoint 10.5. Allow the user to include and exclude element types in the set of elements. Content only
- Checkpoint 10.6 To help the user decide whether to traverse a link, make available the following information about it: link element content, link title, whether the link is internal to the resource (e.g., the link is to a target in the same Web page), whether the user has traversed the link recently, whether traversing it may involve a fee, and information about the type, size, and natural language of linked Web resources. The user agent is not required to compute or make available information that requires retrieval of linked Web resources. Content only

- Checkpoint 10.9 Indicate the relative position of the viewport in rendered content (e.g., the proportion of an audio or video clip that has been played, the proportion of a Web page that has been viewed, etc.). User agent only
- Checkpoint 11.7 For graphical user interfaces, allow the user to configure the position of controls on tool bars of the user agent user interface, to add or remove controls for the user interface from a predefined set, and to restore the default user interface. User agent only

References

For the latest version of any W3C specification please consult the list of W3C Technical Reports at http://www.w3.org/TR.

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[DOM2STYLE]
"Document Object Model (DOM) Level 2 Style Specification", V. Apparao, P. Le Hégaret, C. Wilson, eds., 13 November 2000. This W3C Recommendation is http://www.w3.org/TR/2000/REC-DOM-Level-2-Style-20001113/.

[UAAG10]
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