

Summary and Checklist: Multimedia, Animations, and Motion

Summary

Four main methods of making video and audio accessible:

- **Captions:** Text synchronized with the media, for people who cannot hear the spoken words.
- **Transcripts:** The full text of the spoken words and important visual information in the media file, to read as an alternative to watching or listening to the media file.
- **Audio descriptions:** A version of the media file with a narrator explaining important visual information (such as unspoken actions and events) for the benefit of people who cannot see what's happening.
- **Sign language interpretation:** Video of an interpreter, synchronized with the media file (or in the same video frame), for the benefit of people who know sign language.

Additional considerations:

- **Clear audio:** Prominent background sounds make it difficult for people who are hard of hearing to understand the spoken words.
- **Preventing seizures:** Flashing visual effects in videos can cause seizures in some people.
- **Preventing dizziness:** Some people with vestibular disorders can become dizzy, nauseous, or disoriented when there is excessive motion in video or animated content.
- **Accessible media player:** The media player itself has to be keyboard-accessible and needs to communicate the names, roles, and values of the controls and the states of the controls.
- **Preventing auto-play audio interference with screen readers:** Media players that auto-play can interfere with screen reader users' ability to hear their screen reader.

Checklist

Captions and Transcripts

When Captions Are Needed

- Prerecorded multimedia (video plus audio) files **MUST** include synchronized captions.
- All live multimedia (video plus audio) events that contain dialog and/or narration **MUST** be accompanied by synchronized captions.
- All live audio-only content that contains dialog and/or narration **SHOULD** be accompanied by text-based synchronized captions.

When Transcripts Are Needed

- Prerecorded multimedia (video plus audio) **SHOULD** have a text transcript.
- Prerecorded audio-only content **MUST** be accompanied by an easily-reachable text transcript.
- Prerecorded video-only content **MUST** include audio descriptions **OR** a text transcript.
- A text transcript describing the visual aspects of the video **SHOULD** be provided for video-only content.

What to Include in Captions and Transcripts

- **Captions** **MUST** be verbatim for scripted content (except when intentionally creating simplified captioning for a relevant target audience, e.g. people with cognitive disabilities).
- **Transcripts** **MUST** be verbatim for scripted content.
- **Captions** and **transcripts** **SHOULD** be verbatim for unscripted or live content (with the optional exception of stuttering or filler words -- like "um" -- when captioning the filler words reduces reading comprehension of the **captions** or **transcript**).
- Important visual events **MUST** be described in the **transcript**.
- Important background sounds **MUST** be conveyed in **captions** and **transcripts**, preferably in [brackets] or (parentheses).
- Speech that is spoken off-screen **MUST** be captured in **captions** and **transcripts**.
- The identity of the person speaking **MUST** be identified in **captions** and **transcripts**.
- **Captions** and **transcripts** **SHOULD** use punctuation to convey emphasis whenever possible, rather than write extra text to explain the emphasis.
- **Captions** **SHOULD** use conventional spelling, rather than attempt to write words phonetically, except when phonetic spelling is essential to the meaning of the content.
- **Captions** and **transcripts** **MUST NOT** reveal intentionally-withheld information in the content before the appropriate time.
- Music **SHOULD** be identified by title and artist whenever possible in **captions** and **transcripts**, unless doing so would be inappropriate to the content.
- Important music lyrics **SHOULD** be included in **captions** and **transcripts**, if relevant to the meaning of the content.
- When speech is inaudible or difficult to perceive clearly, **captions** and **transcripts** **SHOULD** say so, using neutral language.

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Captions and Transcripts (continued)

What to Include in Captions and Transcripts (continued)

- Strong language SHOULD be retained and not edited out of **captions** and **transcripts**, whenever possible, OR SHOULD be bleeped or muted to match style or content requirements of the intended audience or context.
- **Captions** and **transcripts** SHOULD indicate when speech is whispered or mouthed.
- **Captions** SHOULD describe sounds in terms of the sounds themselves, not the actions causing the sounds.

Visual Presentation of Captions

- Captions SHOULD NOT exceed three lines on the screen at a time.
- Caption line breaks, when necessary, SHOULD be inserted at logical points between phrases, rather than in the middle of a phrase.
- Captions SHOULD be typed in mixed case.
- The default font for captions SHOULD be a sans-serif font.
- The maximum number of characters per line of captions SHOULD NOT exceed 32 characters.
- Captions SHOULD remain on the screen for a minimum of 1 second under all circumstances, AND SHOULD take into account the number of words, at 0.3 seconds per word, if possible.
- Captions SHOULD be positioned to not obscure on-screen text, people's faces, or other important visual information.
- Captions SHOULD be precisely synchronized to the audio, except when doing so would make captions difficult to read.
- The default color combination SHOULD be white text on a black background.
- The default caption font color and background MUST be a minimum of 3:1 (assuming a minimum font size of 18 point).
- The default font size for captions SHOULD be at least 22pt.
- The default font weight for captions SHOULD be normal (not bold).
- Colors in captions MUST not be used as the only way to convey meaning.
- Italics or all caps MAY be used for emphasis in captions when punctuation alone does not convey the full meaning.

- Quotation marks (or optionally italics or underline, if supported in the caption format) and mixed case capitalization SHOULD be used to designate titles (e.g. of books or movies) when appropriate in captions.
- The last caption frame SHOULD be removed from the screen during long silent intervals.
- Any gaps in captions SHOULD be a minimum of 1.5 seconds.
- Periods of silence SHOULD be noted as such when the visual content gives the impression that there may be important sounds or speech.
- Additional on-screen time for a caption frame SHOULD be added when the caption contains unfamiliar or uncommon words or phrases.
- Additional on-screen time for a caption frame SHOULD be added when there is a lot happening visually on the screen.

Visual Customizability of Captions

- Users SHOULD be able to customize the visual appearance of captions.

Caption File Format

- Multiple caption file formats SHOULD be provided.
- At least one of the file formats SHOULD be in a WebVTT file format.

Audio Descriptions

When Audio Descriptions Are Needed

- Prerecorded multimedia (video plus audio) MUST include audio descriptions.
- Prerecorded video-only content MUST include audio descriptions OR a text transcript.
- Audio descriptions MAY be provided for live multimedia (audio plus video) content.
- Audio descriptions MAY be provided for live video-only content.

Extended Audio Descriptions

- Where pauses in foreground audio are insufficient to allow audio descriptions to convey the sense of the video, extended audio description SHOULD be provided for all prerecorded multimedia (video plus audio) content.

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Audio Descriptions (continued)

Sign Language Interpretation

- Determining When Sign Language Interpretation is Needed
- Sign language interpretation MAY be provided for prerecorded multimedia (video plus audio).
- Sign language interpretation MAY be provided for prerecorded audio-only content.
- Sign language interpretation MAY be provided for live multimedia (video plus audio) content.
- Sign language interpretation MAY be provided for live audio-only content.

Media Player Accessibility

Keyboard Accessibility

- All functionality of a media player MUST be available to keyboard users

Screen Reader Accessibility

- All controls of a media player MUST present the correct names, roles, and values to screen reader users.

Captions, Transcripts, and Audio Descriptions

- Media players SHOULD allow users to access captions, transcripts, and audio descriptions.

Customizability

- Media players SHOULD allow visual customization of captions.
- Media players SHOULD remember user preferences.
- Media players SHOULD allow full screen video.

Background Sounds

Background Sounds in Media

- Background sounds in prerecorded audio-only and prerecorded multimedia content SHOULD be minimized (20dB lower than foreground sounds, except for occasional sounds of no more than 2 seconds) or eliminated during narration or dialog, or a method must be available to turn off background sounds.
- Background sounds in live audio-only and live multimedia content SHOULD be minimized (20dB lower than foreground sounds, except for occasional sounds of no more than 2 seconds) or eliminated during narration or dialog, or a method must be available to turn off background sounds.

Background Audio on Web Pages

- A mechanism MUST be provided to stop, pause, mute, or adjust volume for audio that automatically plays on a page for more than 3 seconds.

Flashing Content

- A page MUST NOT contain content that flashes more than 3 times per second, unless that flashing content is sufficiently small, and the flashes are of low contrast and do not exceed general flash thresholds or red flash thresholds.

Animations and Motion

Parallax Effects

- Parallax effects SHOULD be kept to a minimum, in terms of the total number of parallax effects, the amount of parallax within each individual effect, and the size of the area affected.
- All content and features within parallax scrolling content MUST be accessible by keyboard.
- The contrast of the text against all parts of a moving background MUST be a minimum of 4.5 to 1 for small text or 3 to 1 for large or bold text.

Background Videos and Animations

- Important content MUST NOT be conveyed through background videos and animations, unless users have full control over playback, and full access to any required captions, transcripts, and audio descriptions.
- A method MUST be provided to pause, stop, or hide any background videos or animations that begin playing automatically and which last 5 seconds or more.
- A method SHOULD be provided to pause and restart background videos and animations.
- The contrast of the text against background videos and animations MUST be a minimum of 4.5 to 1 for small text or 3 to 1 for large or bold text.
- Movement within background videos and animations SHOULD be minimal.
- Background videos and animations SHOULD NOT contain sounds.

Animations from Interactions

- A user SHOULD be able to disable motion animation triggered by interaction, unless the animation is essential to the functionality or the information being conveyed.

Auto-Play

- A method MUST be provided to pause, stop, or hide any media content that begins playing automatically and which lasts 5 seconds or more.