Videos and Accessibility
a11yoz.com/ahg-videos
Hidden in plain sight

Speech-to-text program
Magnifier
Epilepsy
Migraines
It’s not just about vision impairments
Our Services

- Audits
- Mobile testing
- Building web sites
- CMS testing
- Accessible design
- Video accessibility

- User testing
- OS / browser testing
- Consultation
- Accessible documents
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Our Products

- OzPlayer
- OzART
- OzWiki
- BrowseAloud

More information: www.accessibilityoz.com.au
Common accessibility issues for video

- Inadequate keyboard access
- Insufficient control and operation
- Incorrect implementation
- Inaccessible content
- Inability to gain a full and complete understanding of all information contained in the video
About video

- Video makes up approximately 65% of all search results
- Completion of a video with captions doubles compared to without captions
- Videos with transcripts earned 16% more revenue than videos without transcripts
Impact on the end user
Impacts: Keyboard trap

Some video players contain a keyboard trap:

- Screen reader users typically use the keyboard in conjunction with their assistive technology.
- Users with restricted physical ability may also rely on the keyboard alone to access website content.
Keyboard trap - unable to play or bypass the video with the keyboard.
Melbourne moratorium against Vietnam War

Things to think about

1. Before viewing
   
   What are the views of war in your family or friendship group, and what are these views based upon?

   What images or movies do you think of when you think of war? Are these a positive or negative representation of war? What do these depictions suggest about the society that created them?

2. As you view

3. After viewing

4. Next steps
Impacts: Keyboard inaccessibility

Some video players do not have the ability to operate the video controls with the keyboard.

- This limits the video use to mouse users only

Some video player controls do not have a highly visible keyboard focus indicator

- Does not prevent keyboard operation but makes it very difficult
Keyboard inaccessibility

controls never receive keyboard focus
Keyboard inaccessibility
Keyboard focus missing

- No keyboard focus indicator on some items
- Colour used to indicate volume level
- Help is after the video

YouTube Address: http://www.youtube.com/watch?v=Vh
You can go to the YouTube video you want to watch and copy and paste the address at the top into this box.
Impact: Auto-play

Some video players will automatically start when a page opens.

- Video audio clashes with the user’s screen reader audio (both run at the same time)
- Screen reader users and keyboard users have to manually search through the page until they find the video and stop it using the player controls
There may not be a website mechanism to pause or stop the video.
Auto-play

- Video starts automatically
- Controls cannot be accessed by the keyboard
Impact: Volume control

Some video players do not allow the volume to be controlled

- Users with a hearing disability may not be able to understand all or part of the video
- Control of the volume, independent of the system volume, should be provided
Impact: Functionality

Disabling browser functions can cause the video to disappear, move or appear actionable

- Screen reader users will sometimes disable certain browser functions, e.g. JavaScript, Flash, CSS to facilitate use of their assistive technology
- If an equivalent alternative is not provided the user is prevented from accessing the video content
Impact: Flashing or flickering content

Videos with flashing content which flash more than three times in any one second period may:

- Induce seizures in users with photosensitive seizure disorder
- Trigger migraines in sensitive users
Impact: Use of colour and colour contrast

- Do not convey information with colour alone
- Ensure sufficient difference between foreground text and background imagery
- Do not use a patterned background
Impacts: Transcripts

Missing or inadequate transcripts

- Videos which do not have a transcript exclude users that are unable to access the video itself
- Transcript must be provided in an accessible format
- Additional content presented in the transcript may be missed by non-transcript users
Interactive transcript

It has shed much innocent blood.
Impact: Captions

Missing or inadequate captions

- In some instances videos do not include captions or captions omit dialogue or important sound effects
- Additional content contained within captions may be missed by those not reliant on captions
- If colour contrast of captions is insufficient information may not be easily read
Low colour contrast

content is difficult to read
Inaccurate captions

Hey man. How's your Jamaican vacation going?

imitated Jamaican vacation dot
Impact: Audio descriptions

Missing or inadequate audio descriptions

- Videos with inadequate audio description means vision impaired users miss video content
- Important visual information may be provided in the video that isn’t conveyed by the audio sound track but which can be included in an audio description
So how do you create an accessible video experience?
Accessible content

- No flashing content which flashes more than three times in any one second period
- Use high contrast colours for any text overlaying video content
- Do not convey information with colour alone
- Avoid patterned backgrounds
Accessible transcript

- Be in an accessible format
- Identify the speakers and include all speech
- Include relevant information about the speech
- Include relevant non-speech audio information
- Include any textual or graphical information
Accessible transcript

- Include a description of on-screen events and important changes of scene
- Indicate the end of the transcript if on the same page as the video or provide a mechanism to return to the video if on another page.
Accessible Captions

- Synchronised to appear at the same time as the sound they are captioning
- Include all important audio information
- Can be read
  - Sufficient colour contrast between background and caption text
  - Appear on the screen for enough time
Accessible Captions

- There are no periods without captions
- Attribute speech to a particular speaker and identify all changes in speaker
- Do not contain important information not included in the video
Accessible Audio descriptions

- Adequately describes all important visual information
- Does not impact on other speech or important sounds
  - May need to create an alternative video which includes pauses to allow sufficient time for information to be delivered at the appropriate point (extended audio description)
Accessible Audio description

- Can be heard
  - Is distinguishable from the audio content in the video itself
- Contains only information included in the video
Accessible media player

Must address the common issues by providing

- Adequate keyboard access
- Sufficient control and operation
- Correct implementation
So we built…
OzPlayer features

Skip links
- Skip video entirely
- Skip to transcript

Access to help information before the video
Fully keyboard accessible
Highly visible keyboard focus indicator on all controls

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OzPlayer features

Keyboard shortcuts

- space to toggle play and pause
- up and down arrow for volume
- left and right arrow for seek + page keys for broad seeking
- double-click to enter and exit full screen (where supported)
OzPlayer features

Clear and simple controls
- Play, Pause, Captions, Audio Description, Full screen
- Audio control is independent of the system volume
- Mouse and keyboard operable
OzPlayer features

Current state is clearly indicated
  - Play/Pause, CC on or off; AD on or off; Audio on or off

Interactive transcript with a text fallback
  - Current position is clearly marked

Accessible captions

Synchronised audio description

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Technical OzPlayer features

Use of the HTML5 Video and Audio APIs

- for monitoring buffering and loading
- the HTML5 Fullscreen API
- and implementing the custom controls
Technical OzPlayer features

Uses the HTML 5 video elements

- VIDEO and AUDIO
- SOURCE to specify video and audio source
- INPUT type ‘range’ for the slider functions (video position & volume) when CSS is disabled
- TRACK to load captions defined using the HTML5 standard WebVTT format
Technical OzPlayer features

Interactive transcript
- uses the MARK element to highlight the current line

Captions
- custom solution for loading and parsing VTT as the native TextTracks API is not well supported
Technical OzPlayer features

Audio description

- custom solution to support synchronisation of the audio description as the native MediaController API is not well supported
Accessible fallbacks to OzPlayer

Browser does not support HTML5
- falls back to Flash

Flash or JavaScript is disabled
- falls back to the text alternative i.e. text transcript
- video can be downloaded

CSS is disabled
- provides form controls to retain full functionality
Implementation

Include HTML5 video elements in the page
Include the OzPlayer JavaScript library
Files hosted on your web server
- Video file;
- Transcript (interactive and text);
- Caption file; and
- Audio description file.
Implementation

YouTube / Vimeo hosted video
• Can be played through OzPlayer
OzPlayer Demonstration

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How do I get it?

www.oz-player.com
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Questions

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