

HTML 5 Accessibility Panel

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Agenda

- Brief Slide Presentations
- Panel Q&A

HTML5 Accessibility– Steve Faulkner

- A Work in Progress
 - Details still being developed and agreed on
 - Browser implementations
 - Assistive Technology implementations
 - www.HTML5accessibility.com

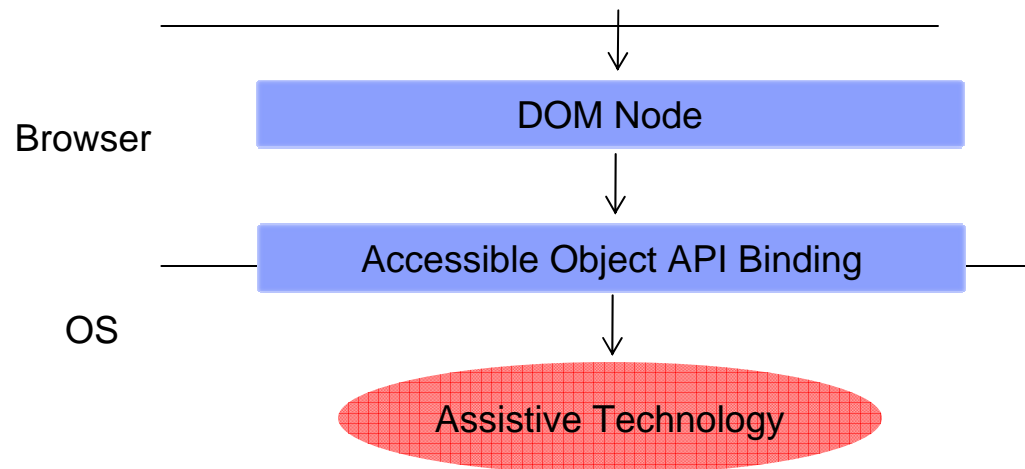
WAI-ARIA, HTML5 & Accessibility Feature Implementation – Steve Faulkner

- WAI-ARIA is integrated into HTML 5
- Author conformance defined in HTML5
 - i.e., rules for use of ARIA in HTML5
 - Just about ready...
- [ARIA in HTML5](#)
- [A new HTML to Platform Accessibility API Implementation Guide](#)
 - Another work in progress
 - Provide guidance for user agent (browser) of how to implement the accessibility of HTML features.
 - Promotes harmonization of implementation across browsers.
 - Improved interoperability users and web developers win!

WAI-ARIA – Quick Overview - Steve Faulkner

WAI-ARIA

```
<div role="checkbox" aria-checked="true" onkeyup="...">
```



- Semantic Structure through tree hierarchy
- Attribute change notification
- Focus management
- Styling

- Role
- States and Properties
- Rich Text
- State and Property Event Notification
- Actions
- Structural access to other objects
- Advanced interfaces (Tables, relationships)
- OS Accessibility API Notification

- 20% of the work needed for rich desktop
- A Cross platform accessibility API
- Ubiquitous adoption
- Included in a large number of products from major companies
- Designed to support WCAG 2 and the U.S. 508 Refresh
- All major browsers providing support

MultiMedia = Multi-Modal (<video> & <audio>) - John Foliot

Accessibility Issues with the Media elements

User Requirements

- Blindness
- Low vision
- Atypical color perception
- Deafness
- Hard of hearing
- Deaf-blind
- Dexterity/mobility impairment
- Cognitive & neurological disabilities

http://www.w3.org/WAI/PF/HTML/wiki/Media_Accessibility_Requirements

MultiMedia = Multi-Modal (<video> & <audio>) - John Foliot

Accessibility Issues with the Media elements

Alternative Content Technologies

- Captioning
- Enhanced captions/subtitles
- Transcripts
- Sign translation
- Described video
- Extended video descriptions
- Text video description
- Clear audio
- Content navigation by content structure

http://www.w3.org/WAI/PF/HTML/wiki/Media_Accessibility_Requirements

MultiMedia = Multi-Modal (<video> & <audio>) - John Foliot

Caption/Subtitle Formats

- Web Video Time Text (.vtt)
<http://developers.whatwg.org/video.html#webvtt>
- Timed Text Markup Language (.xml.dfxp) <http://www.w3.org/TR/ttaf1-dfxp/>
 - Society of Television and Motion Pictures Engineers TimedText (SMPTE-TT) <http://store.smppte.org/product-p/st%202052-1-2010.htm>
- Neither format has been declared a default
- No Browser is providing native support for either
- Web VTT is a specification in flux - not finalized to date
- SMPTE-TT is a profile of TTML

MultiMedia = Multi-Modal (<video> & <audio>) - John Foliot

The <track> element

```
<track kind="captions" src="myvid.vtt" srclang="en"/>  
<track kind="subtitle" src="myvid_sp.xml.dfxp" srclang="sp"/>
```

Keyword	Brief description
<i>subtitles</i>	Transcription or translation of the dialogue, suitable for when the sound is available but not understood (e.g. because the user does not understand the language of the media resource's soundtrack). Displayed over the video.
<i>captions</i>	Transcription or translation of the dialogue, sound effects, relevant musical cues, and other relevant audio information, suitable for when the soundtrack is unavailable (e.g. because it is muted or because the user is deaf). Displayed over the video; labeled as appropriate for the hard-of-hearing.
<i>descriptions</i>	Textual descriptions of the video component of the media resource, intended for audio synthesis when the visual component is unavailable (e.g. because the user is interacting with the application without a screen while driving, or because the user is blind). Synthesized as separate audio track.
<i>chapters</i>	Chapter titles, intended to be used for navigating the media resource. Displayed as an interactive list in the user agent's interface.
<i>metadata</i>	Tracks intended for use from script. Not displayed by the user agent.

http://www.w3.org/WAI/PF/HTML/wiki/Media_TextAssociations
http://www.w3.org/WAI/PF/HTML/wiki/Media_MultitrackAPI

MultiMedia = Multi-Modal (<video> & <audio>) - John Foliot

Alt Media (Sign Language, described video)

- As of March 1st, 2011 there is not yet a means to associate and synchronize supporting multi-media tracks to a primary video.
- Work is on-going to develop a solution. (Post CSUN Face-to-Face)

Accessibility Checklist ☹️

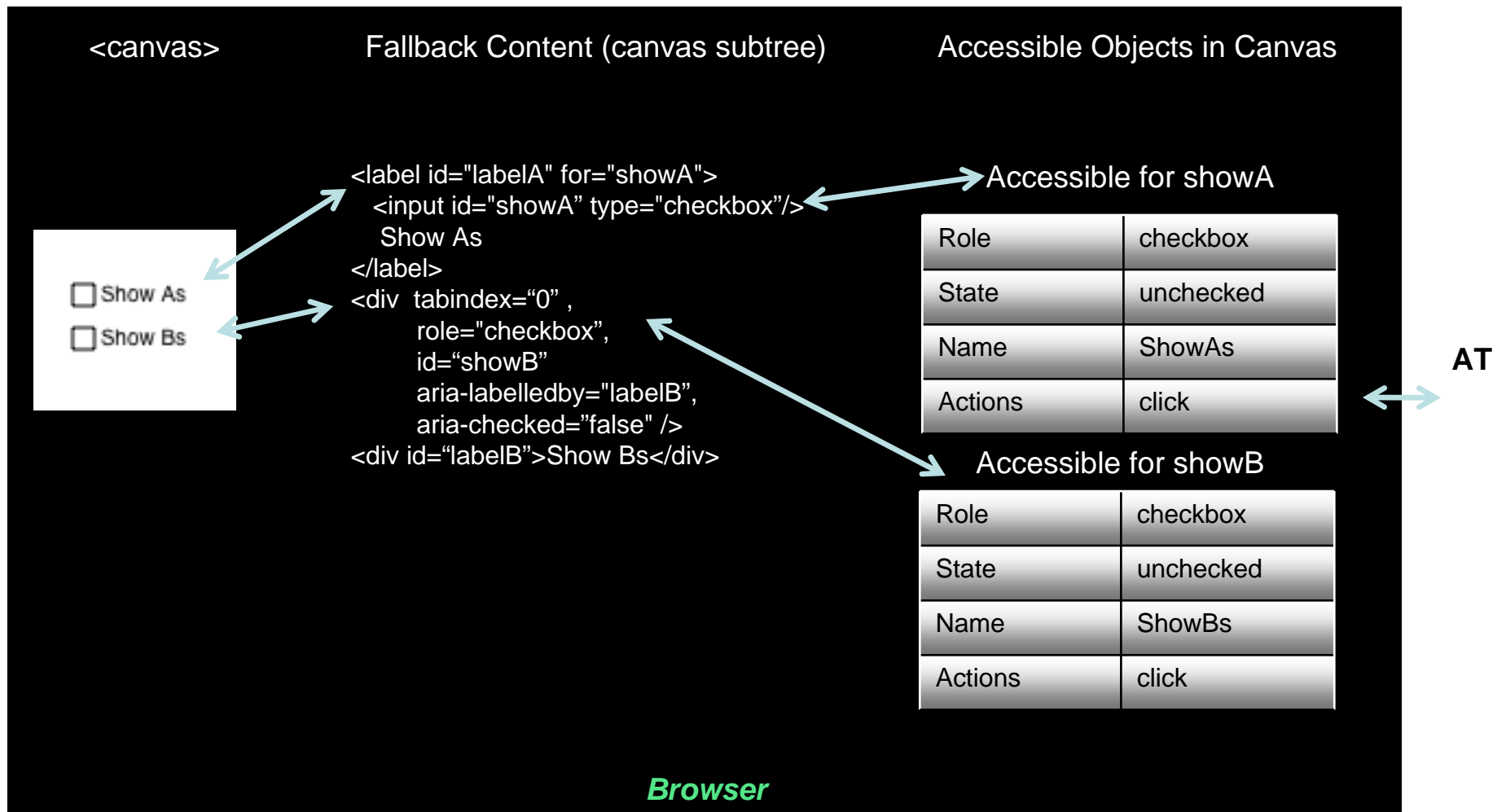
- There are no browsers on the market today that support any of the accessibility solutions developed for HTML5 media elements.
- It is anticipated to see browser support in the second half of 2011.

MultiMedia = Multi-Modal (<video> & <audio>) - John Foliot

Adding a video with HTML5

```
<video
  poster="myvid.jpg" (*)
  tabindex="0"
  preload="auto"
  height="240" width="320"
  controls>
<source src="myvideo.mp4" type="video/mp4"/>
<source src="myvideo.webm" type="video/webm"/>
<source src="myvideo.ogv" type="video/ogg"/>
<track kind="captions" src="myvideo.vtt" srclang="en"/>
<track kind="subtitle" src="myvideo_sp.vtt" srclang="sp"/>
<p>Final fallback content</p>
</video>
```

Canvas Accessibility Conceptualization – Rich Schwerdtfeger



Canvas Accessibility – Rich Schwerdtfeger

- Binding of Canvas Accessibility fallback content to Drawing Surface
 - Keyboard navigable
 - Provide accessibility semantics using standard Controls and WAI-ARIA
 - Supported in Chrome and IE 9
- New APIs to support screen magnifiers
 - New DrawFocusRing function in Canvas 2D API to drive magnification and render focus according to system settings
 - Controversial: Canvas is not the best technology for rich text. It makes far more sense to use the rich text in HTML, rather than canvas.
 - Caret and Selection tracking in Canvas 2D API (context information, caret rectangle information)
 - New Text Metrics function in Canvas 2D API to facilitate caret and focus ring drawing
- New API to provide expose system caret blink rate to help authors prevent seizures
- Content positioning strategy relative to canvas (being discussed)

Text Alternatives: Programmatic Access, or Can the AT find it? - Cynthia Shelly

- Valid Short Text Alternatives (or the attribute formerly known as “alt text”)
 - Change proposal from Accessibility Task Force
 - alt attribute is present (empty or non-empty), or
 - aria-labelledby attribute present (non-empty only), or
 - element is located within a <figure> element that has a non-empty <figcaption> element, or
 - role attribute is present and has a value of "presentation".
 - Current Spec Text
 - Alt (no reference to empty or not)
 - Title (non empty)
 - Figure with non-empty fig caption
 - Email exception
 - "generator" for auto-generated content
- Long Descriptions: Still an open issue, will be addressed during last call phase
- figure and figcaption
- ARIA
 - aria-label
 - aria-labelledby
 - aria-describedby

Text Alternatives: Useful Equivalents – Cynthia Shelly

- Ok, there's text, but...

...Is it the **RIGHT** text?

- Resources for writing text alternatives
 - HTML5: Techniques for providing useful text alternatives
 - <http://dev.w3.org/html5/alt-techniques/>
 - Web Content Accessibility Guidelines (WCAG) 2.0 Techniques
 - <http://www.w3.org/TR/WCAG20-TECHS/>

Text Alternatives: Useful Equivalents – Cynthia Shelly

 [Home](#)

Example code 1 - inline image:

```
<a href="home.html">  
Home</a>
```

Example Image in context:

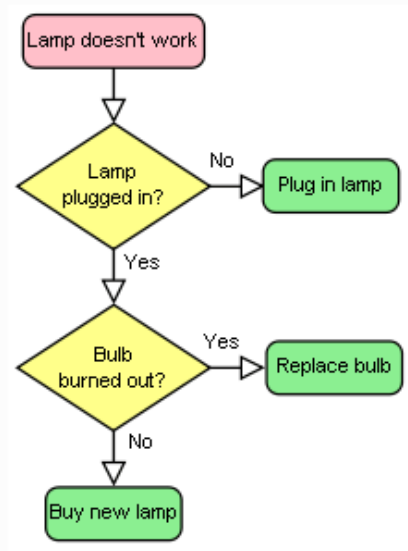


Your session is about to expire.

Example code:

```
<p><strong>  
Your session is about to expire</strong></p>
```


Text Alternatives: Useful Equivalents – Cynthia Shelly



Example Code:

```
<p>A flowchart representing a process for dealing with a non-  
functioning lamp:</p>  
<p></p>
```

Text Alternatives: Useful Equivalents – Cynthia Shelly



New Standard Controls – Cynthia Shelly

- **New Input Types**
 - Range (slider)
 - Text boxes: text, search, telephone, url, email, password
 - Dates and Time
 - Number: validation
 - Color picker
 - And the usual: checkbox, radio, buttons, image buttons, file upload
- **More Form Elements**
 - Output
 - Progress
 - Meter
- **Validation**
 - Required
 - Min, max, and step
 - Pattern for regular expressions
 - Custom validation constraints
- **Behavior**
 - Autocomplete, list, and multiple, datalist
 - Placeholder
 - Autofocus
- **Interactive Elements**
 - Menus and Commands
 - Details and Summary

Accessibility impact

- Consistently mapped to Accessibility APIs
- Web apps act more like desktop apps with AT
- Less need for custom UI in web apps