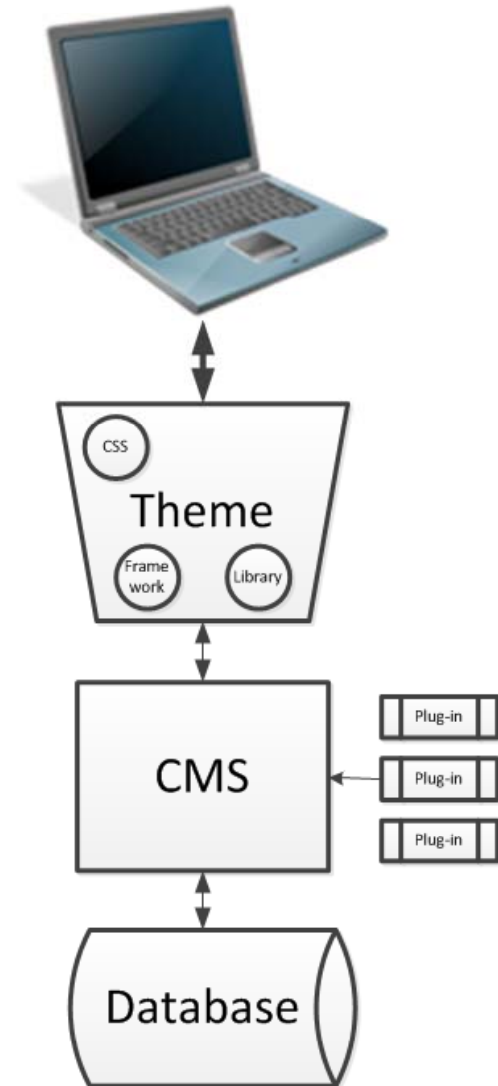# Building an Accessible CMS Site

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How a CMS Works

- Content management system (CMS) engine (Drupal, WordPress, etc.)
- A database (MySQL)
- Plug-ins to add functionality
- A theme to structure and present content

Principles

- Perceivable
- Operable
- Understandable
- Robust

- Web Content Accessibility Guidelines (WCAG) 2.0 http://www.w3.org/TR/WCAG20/

Goals

- Create an inclusive University
- Building a site that works with assistive technologies
  - NVDA Screen Reader - http://www.nvaccess.org/
  - FireVox - http://firevox.clcworld.net/
  - VoiceOver - http://www.apple.com/accessibility/osx/voiceover/
- Building a site that is intelligible to people using assistive technologies

Methods

- Adhere to standards
- Use semantic elements
- Follow WCAG 2.0
- Apply Accessible Rich Internet Applications (ARIA) attributes
- Use ECMA Standard Scripting
- Use Progressive enhancement methods in scripting

Page Design Access Blockers

- Contrast and luminosity
- Color issues
- Font legibility
- Reading order
- Scalability (user-scalable=yes)

Addressed by theme designer

Content Access Blockers

1. No page <title/>
2. No heading elements <h1/>…<h6/>
3. No link element text or title="" attributes
4. No form element label elements
5. No caption elements and <table/> summary attributes
6. No scope and id attributes to relate column and row headers to data
7. No useful alt text for images, or are missing the alt attributes altogether
8. No captions for videos

Addressed by the people who enter the content into pages

CMSs Start With Good Accessibility

- WordPress
  http://make.wordpress.org/themes/guidelines/guidelines-accessibility/
- Drupal
  https://drupal.org/about/accessibility

- Understand what they have done
- Don't mess it up

Vendors Invest in Accessibility

- Apple Accessibility
  http://www.apple.com/accessibility/
- VoiceOver
  http://www.apple.com/accessibility/voiceover/
- Microsoft Accessibility
  http://www.microsoft.com/enable/
- Adobe Accessibility
  http://www.adobe.com/accessibility/

Themes

- Pre-built set of code that defines page layout, colors, functionality, fonts and font sizes, and navigation
- Many are built on frameworks such as Bootstrap, which provide libraries of code

Accessible Themes

- Blaskan – http://wordpress.org/themes/blaskan
- Badeyes Skeleton – http://www.badeyes.com/services/
- Ambrosia – http://wordpress.org/extend/themes/ambrosia
- Scrapbook – http://wordpress.org/extend/themes/scrapbook
- Twenty-Twelve Child Theme – http://daniemon.com/blog/accessible-wp-theme-twenty-twelve/
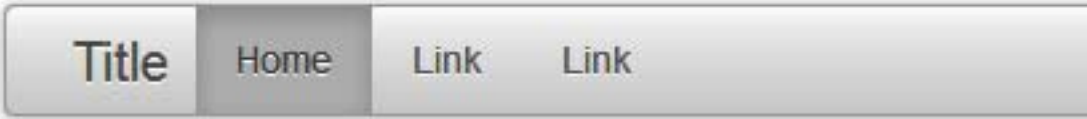
Examine them closely, perfection has not yet been achieved

Frameworks

- Themes are generally built on existing frameworks, which may or may not have been created with accessibility in mind
- Example frameworks:
  - Bootstrap - http://getbootstrap.com/
  - Skeleton Boilerplate - http://www.getskeleton.com/
  - Whiteboard - http://whiteboardframework.com/

How Frameworks Work

Example

```
1.   <div class="navbar">
2.     <div class="navbar-inner">
3.       <a class="brand" href="#">Title</a>
4.       <ul class="nav">
5.         <li class="active"><a href="#">Home</a></li>
6.         <li><a href="#">Link</a></li>
7.         <li><a href="#">Link</a></li>
8.       </ul>
9.     </div>
10.  </div>
```

Adding Accessibility

- Framework example does not include labelling the input element

Example

Search

```
1.  <form class="navbar-search pull-left">
2.    <input type="text" class="search-query" placeholder="Search">
3.  </form>
```

Plug-ins

- Example: Forms


```
<form action="form_action.asp" method="get">

  <label for="first">First name:</label>

    <input type="text" name="fname" id="first"/><br />

  <label for="last">Last name:</label>

    <input type="text" name="lname" id="last" /><br />

  <input type="submit" value="Submit" />

</form>
```

FormBuilder Plug-in

- Creates nice forms

Send a Question, Get a Reply by Email

Important: For your security, do not include your Social Security number, any passwords, or any private access codes in your message.

Your Name

Rick Ells

Email

rells@uw.edu

Your UW NetID

Phone Number

How FormBuilder Builds Forms

- Not using the classical method

```
<div class="formBuilderLabelRequired">Your Name </div>
<div class="formBuilderInput">
    <input id="fieldformBuilderFieldname" type="text" onblur="fb_ajaxRequest(
    'http://www.washington.edu/itconnect/wp-content/plugins/formbuilder
    /php/formbuilder_parser.php', 'formid=2&fieldid=4&
    val='+document.getElementById('fieldformBuilderFieldname').value,
    'formBuilderErrorSpaceformBuilderFieldname')" value="Rick
    Ells" name="formBuilderForm[name]">
</div>
```

- Carleton CMS – Accessibility Considerations
  http://www.youtube.com/watch?v=H5N57Kwjx9s

Work Still To Be Done On IT Connect

- Review how we build forms
- Make sure graphics have appropriate ALT attributes
- Develop better methods for assessing accessibility of plug-ins
- Add ARIA roles
- Participate in Bootstrap and other communities improving code and script libraries to better address accessibility

Resources

- Accessibility With WordPress http://www.slideshare.net/joedolson/accessibility-with-wordpress
- Accessibility, WordPress Codex http://codex.wordpress.org/Accessibility
- 25 Ways to Make Your WordPress Site More Accessible http://wpmu.org/25-ways-to-make-your-wordpress-website-more-accessible/
- WP Accessibility Plug-in http://wordpress.org/plugins/wp-accessibility/