

# Accessible Web Design

#### Why Bother?

- You can, therefore you should
- It's good business!
  - In the USA 10 million severely disabled people
  - \$46 billion market
- One day you'll be old too
  - Current \$100 billion market

#### Why Bother?

- Improved usability for all users
  - When it's easier to navigate, productivity increases
- It's a challenge
- It's the law!

### Designing for the Visually Impaired

Types of visual impairment



- Rely on screen readers: JAWS, Hal, VoiceOver or Orca
- Text-to-speech technology
- Low vision
  - Rely on screen magnification tools: Built in or 3rd party (Zoom-Text)

#### Designing for the Visually Impaired



Colour and Contrast Deficiencies



Monochrome vision



Distinguishing colours (green from red / blue from yellow / red from black)



Photosensitive Seizures



Flickering images

## Structured HTML: Best Practices and Practical Advice

#### HTML: Keep it Simple

- (X)HTML should be well designed, semantically correct, relatively uncomplicated and human-readable
  - Stay away from tables for layout purposes
- The reading order should make sense before you apply CSS: i.e. create markup in a logical order

#### Structure Your HTML

- HTML content should be structured correctly
  - Use <div> for blocks of content
  - <section> available in HTML5 / XHTML2

### Nesting Headings: The Wrong Way

- <h1>Lorem Ipsum</h1>
- Lorem ipsum dolor sit amet, consectetur adipiscing elit.
  Phasellus rhoncus aliquam sem, quis pellentesque ante euismod sit amet. Maecenas id faucibus nisi....
- <h3>Sed Consequat</h3>
- Sed consequat, orci id semper fringilla, dui nisl viverra magna, vitae porta elit tellus sed diam. In bibendum dignissim arcu in venenatis...

#### Nesting Headings Correctly

- <h1>Lorem Ipsum</h1>
- Lorem ipsum dolor sit amet, consectetur adipiscing elit.
  Phasellus rhoncus aliquam sem, quis pellentesque ante euismod sit amet....
- <h2>Sed Consequat</h2>
- Sed consequat, orci id semper fringilla, dui nisl viverra magna, vitae porta elit tellus sed diam. In bibendum dignissim arcu in venenatis. Donec nibh lacus, malesuada ac viverra quis, cursus nor lorem. Nam tristique nulla odio...
- <h3>Duis Aliquam</h3>
- Duis aliquam nisl at urna pretium a consequat neque molestie.
  Aliquam ligula nunc, porttitor sed adipiscing quis, tincidunt non quam.

#### The "title" attribute

Abbreviations <abbr> and Acronyms <acronym> both make use of the title attribute



<acronym title='World Wide Web'>WWW</acronym>

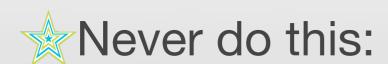
#### Deprecated Tags

- Some time ago the W3C deprecated <s> (strikethrough) and <u> (underline) tags
- However, they left in <b> (bold) and <i> (italicised) font formatting tags in, but do not use these in your markup

#### Visual Formatting

Visual Form	HTML	CSS	Semantic
Bold	<b></b>	font-weight	<strong></strong>
Italics	<i>&gt;</i>	font-style: italic	<em> <var></var></em>
Underline	<u></u>	text-decoration: underline	<em><strong></strong></em>
Strikethrough	<s></s>	text-decoration: line-through	<del></del>
Overline	none	text-decoration: overline	<ins></ins>
Fixed Width	<tt></tt>	font-family	<code><kbd> <samp><var></var></samp></kbd></code>

#### **Anchor Tags**



<a href='#here'>Click here</a>

#### Better:

<a href='/about\_us.html'>About Us</a>

#### Much better:

- <a title='Read more about us'</p>
- href='/about\_us.html'>About Us</a>

#### **Tables**

Never use tables for layout - only use for tabular data!

```
view plain copy to clipboard print ?
01.
    <!-- Table markup-->
02.
03.
    04.
05.
       <!-- Table header -->
06.
07.
           <thead>
08.
09.
                 ...
10.
11.
              12.
           </thead>
13.
14.
        <!-- Table footer -->
15.
16.
           <tfoot>
17.
              ...
18.
              19.
20.
           </tfoot>
21.
22.
        <!-- Table body -->
23.
24.
           25.
26.
                 ...
27.
28.
              29.
30.
           31.
32.
```

#### Forms: Don't write this

```
<form>
```

- First name:
- <input type="text" name="firstname" />
- <br />
- Last name:
- <input type="text" name="lastname" />
- </form>

#### Forms: Instead, write this

```
<form>

<label for="male">Male</label>

<input type="radio" name="gender" id="male" />

<br/>
<br/>
<label for="female">Female</label>
```

<input type="radio" name="gender" id="female" />

</form>

#### Images

Always use the alt text when inserting graphical elements into your pages

<img alt='Jamie Finlay's avatar' src='/public/images/jamie.jpg' />

#### Testing Pages

Alternative text for non-text elements

★ Well-constructed HTML markup

#### Help & Guidelines

- Web Content Accessibility Guidelines
  - http://www.w3.org/WAI/
- Fangs Add-On for Firefox (translates a page into text representative of output from a screen reader)

#### 9 Principles for Web Accessibility

- 1. Don't make assumptions about the physical, mental and sensory abilities of users
- 2. You can only ever assume sending and receiving text
- 3. Users' time and technology belong to them
- 4. Provide text alternatives for non-text content
- 5. Only use widely available technologies
- 6. Use clear language to communicate your message
- 7. Make it usable, searchable and navigable
- 8. Design with semantic meaning and separate design from content
- 9. Progressively add features and allow graceful degradation

## Any questions?