# Inclusive technology
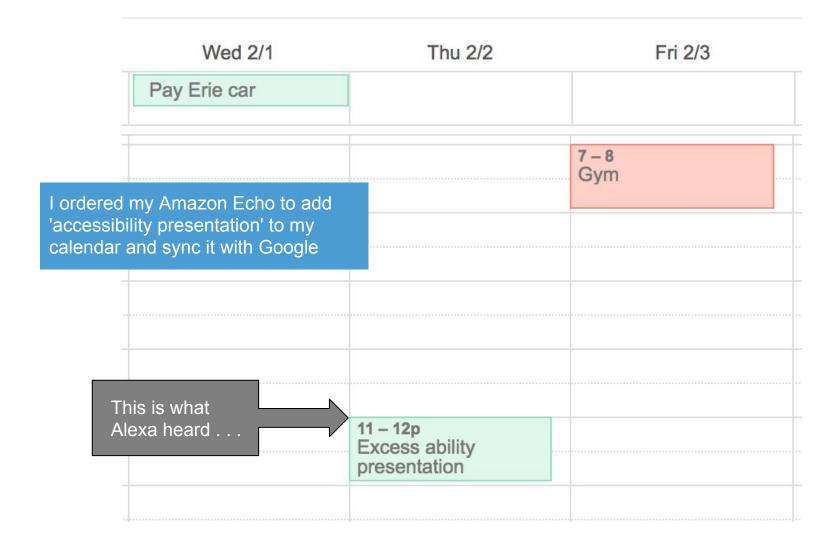
Testing websites for accessibility features

Phil Daquila
ITS Digital Services
pdaquila@unc.edu
April 2017

# GETTING STARTED

> **Removing barriers**

> **aka #a11y**

> **WCAG 2.0 AA from W3C** https://www.w3.org/WAI/intro/wcag

1. Success Criteria
2. Techniques

# GOOD NEWS

> **WordPress building it into core** https://make.wordpress.org/accessibility/
> **Well-documented solutions**
> **Shoot for 'readily achievable' gains**
> **Many free online tools** https://www.w3.org/WAI/ER/tools/
> **Achieved mostly via HTML, CSS**

# AREAS FOR TESTING

> Text alternatives to non-text items
> Color contrast
> Landmarks
> Document structure and markup
> Video/audio captions and transcripts

# AREAS FOR TESTING

*Excluded from this talk (but equally important):*

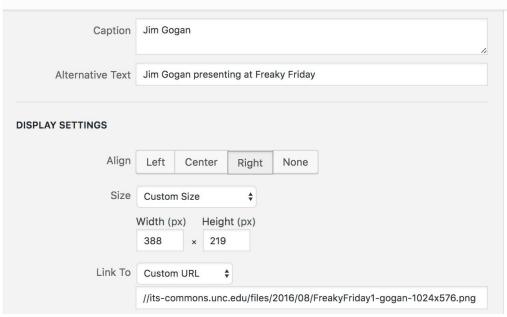> Forms and input labels

> Tables

> Links

> Content

# TEXT ALTERNATIVES

> All non-text content (photos, charts, infografx)
> Captions or alt attribute on every <img>
> Describe message, not content of graphic
> Empty alt: <img alt=""> use for decorative
> Open to interpretation; see decision trees
> longdesc for lengthy alt text in new page

# TEXT ALTERNATIVES

## Image Details

Caption: Jim Gogan

Alternative Text: Jim Gogan presenting at Freaky Friday

### DISPLAY SETTINGS

Align: Left | Center | Right | None

Size: Custom Size

Width (px): 388 × Height (px): 219

Link To: Custom URL

//its-commons.unc.edu/files/2016/08/FreakyFriday1-gogan-1024x576.png

Edit Original | Replace

# COLOR CONTRAST

> Color should not be sole way of conveying info
> Sufficient contrast
   4.5:1 for normal text (under 14 pt)
   3:1 for large text (18+pt, or 14+pt & bold)*
> Check combinations of two colors
> Carolina Blue #7BAFD4 is too light with white

# COLOR CONTRAST

## WEB COLOR PALETTE

*With a11y in mind*

### CAROLINA BLUE

#4B9CD3

**Headers only against White**

- May not be used at smaller text sizes (below 14 pt/1.2 em)
- Permitted at 14-pt bold or 18-pt non-bold and larger

**Section Header**

**Section Header**

### LINK BLUE

#007FAE

**Unvisited links**

- Required at smaller text sizes (below 18 pt/1.5 em) in place of Carolina Blue

Example hyperlink in a typical paragraph.

### ATHLETICS NAVY

#13294B

**In combination with Carolina Blue**

- May also be used as header color or accent
- Examples:

**Section Header**

**Section Header**

**Section Header**

**Section Header**

### DARK GRAY

#585858

**Body Text or Accent with White**

This page uses #585858 for this text.

**Section Header**

### PITCH BLACK

#000000

**Any Text**

- Highest possible contrast
- Always a good choice for body text

DRAFT

# COLOR CONTRAST: TOP TOOLS

1. **Planning colors**
   a. **Lea Verou's Contrast Ratio**
      http://leaverou.github.io/contrast-ratio/
   b. **Contrast Checker by Acart**
      http://contrastchecker.com/
2. **Evaluating colors**
   a. **tota11y** http://bit.ly/2nHIpNf
   b. **Google Acc. Dev Tools** http://bit.ly/1ikZ68B

# LANDMARKS

> ARIA landmark roles
> Tell assistive technologies (AT) structure of page
> With HTML5: <nav role="navigation">
> WordPress handles this already
> See more advanced 'live regions'

# LANDMARKS

| HTML5 | ARIA Role |
|---|---|
| <header> | role="banner" |
| <nav> | role="navigaton" |
| <main> | role="main" |
| <aside> | role="complementary" |
| <section> | role="region" |
| <footer> | role="contentinfo" |

# DOCUMENT STRUCTURE/MARKUP

> Use proper semantic HTML
> Separate markup from styles
> Create a logical outline for each page w/headings
> Sequential headings: no <h3> before an <h2>
> CSS is dressing for sighted users

# DOCUMENT STRUCTURE/MARKUP

```
<h1>Setting the Exposure Manually on a Camera</h1>
  <h2>Set the ISO</h2>
    <h3>The effect of ISO on image quality</h3>
    <h3>High ISO cameras</h3>
  <h2>Choose an aperture</h2>
    <h3>The effect of aperture on depth of focus</h3>
    <h3>Vignetting</h3>
    <h3>Diffraction</h3>
  <h2>Choose a shutter speed</h2>
    <h3>Shutter speed limitations for hand-holding a camera</h3>
    <h3>Long exposures</h3>
```

# VIDEO CAPTIONS/AUDIO TRANSCRIPTS

> Check all your timed media for captions
> Is there a text transcript, especially for dialog?
> Media player a11y is maturing
> YouTube and Vimeo support captions
> Paid solutions, DIY, crowdsourced
> User can adjust controls like color/size

# What can you do to get started?

# STEPS TO TAKE NOW

1. **Study often** http://webaim.org/standards/wcag/checklist
2. **Add testing tools to your workflow**
3. **Fix any glaring problems**
4. **Make new content accessible from the start**
5. **Find real users to test your pages**
6. **Repeat!**

Replying to @jina

"Accessibility is like a blueberry muffin—you can't push the berries in there afterward" @jina quoting @CordeliaDillon #a11y

| RETWEETS | LIKES |
|----------|-------|
| 60 | 48 |

1:27 PM - 9 Apr 2016

1    60    48