

2024 HighEdWeb Accessibility Summit

Don't Ignore 60 Million People: 10 Ways to Improve Your Website Accessibility

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By the End, You'll Be Able To:

- Meet the WCAG accessibility guidelines
- Implement 10 accessibility best practices on your site
- Test your website for accessibility



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WCAG

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Level A

Basic web accessibility

Level AA

Handles the largest and most common barriers for disabled users

Level AAA

The strongest, strictest accessibility rules



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4 Principles of Accessibility

1. **Perceivable**

- Content and user interface components can be seen and heard

2. **Operable**

- Users can interact with the interface and navigation

3. **Understandable**

- Content and operation of the user interface can be understood

4. **Robust**

- Content can be interpreted reliably by a wide variety of user tools and should remain accessible as those tools evolve



How WCAG is Structured

- **Guidelines** - descriptive but not easy to test for
 - **Success Criteria** - testable, each gets a label of A, AA, or AAA
 - **Techniques** - recommended ways to meet each criteria



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Example: “WCAG Guideline 2.4”

- **Guideline 2.4: “Navigable”** - provide ways to help users navigate, find content, and determine where they are
 - **Success Criteria 2.4.1: “Bypass Blocks”** - a mechanism is available to bypass blocks of content that are repeated on multiple pages (Level A)
 - **Sufficient Technique G1** - Adding a link at the top of each page that goes directly to the main content area and skips the header and navigation
 - **Technique ARIA11** - Using ARIA landmarks to identify regions of a page



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Helpful WCAG Links

W3 WCAG Quick Reference:

<https://www.w3.org/WAI/WCAG22/quickref/>

WebAIM WCAG Checklist:

<https://webaim.org/standards/wcag/checklist>



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10 Basic Accessibility Techniques



1. Link Text

Every link should make sense if the link text is read by itself.

- Provide context in your link text and avoid uninformative link text.
- Do not use:
 - “click here”
 - “read more”
 - “link to <https://www.google.com>”
- Don’t make the link text just an extremely long URL.



No empty links!

2. Alternative Text for Images

- An ALT Tag is an HTML attribute applied to image tags to provide a text alternative for the image.

```

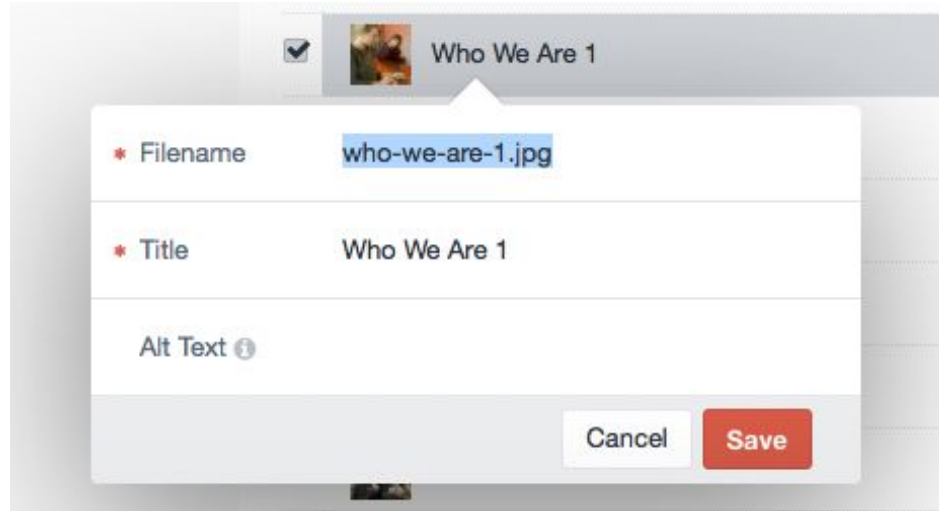
```



ALT Text must be meaningful

- Add meaningful ALT text for images that need to convey meaning.
- If an image does not need to convey meaning and is just for visual interest, an empty alt tag can be used.
- Learn how to write good alt text and make sure you can add alt tags to images.





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Good ALT Text

- ALT text should present the content and function of the image in a succinct manner.
- ALT text should not be redundant.
- ALT text should not use the phrases “Image of ...” or “Graphic of ...” to describe the image.



Context is everything.



Longhorn Band Alumnus Pays It Forward

Longhorn Band and Cockrell School of Engineering alumnus Rick Church recently made the largest planned gift ever to the Longhorn Band — \$12 million, along with a \$7 million gift to the Cockrell School's Department of Mechanical Engineering.

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```

```

```

```



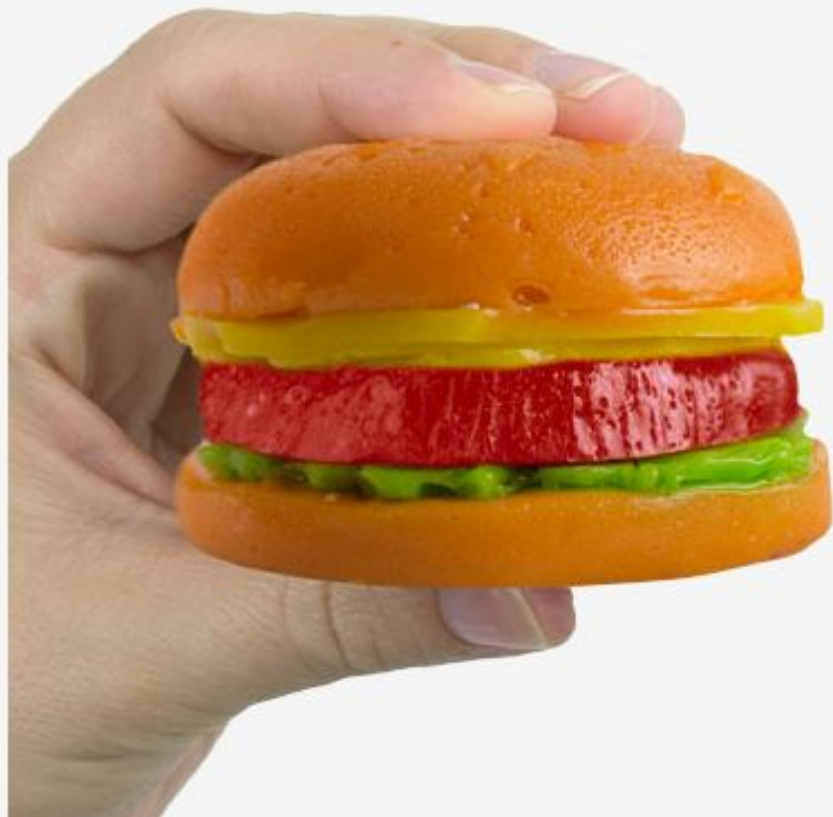
Longhorn Band Alumnus Pays It Forward

Longhorn Band and Cockrell School of Engineering alumnus Rick Church recently made the largest planned gift ever to the Longhorn Band — \$12 million, along with a \$7 million gift to the Cockrell School's Department of Mechanical Engineering.

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Gummy Burger!™

\$7.45

How does a burger with the works sound? A Gummyburger, that is! Our original juicy burger comes complete with cheese, lettuce and tomato, each individually flavored! When it's too cold to grill, or for non-meat eaters, this scrumptious looking treat will make your mouth water! Cherry flavor.

1

ADD TO CART



Like 1



SHOP BY YOUR FAVORITE FLAVOR



3. Keyboard Access

- Make sure that **all functional elements** can be reached and activated using a keyboard.
- Make sure that the tab order is logical.



In, Within, Through, Out



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Keyboard Focus

- Keyboard focus should be **clearly visible** to sighted keyboard users.

Our Community Programs

Knowbility's mission is to ensure equal access to technology for people with disabilities.

➤ John Slatin AccessU 2024

➤ Accessibility Internet Rally (AIR)

➤ Be A Digital Ally

➤ K12 Digital Accessibility

➤ K12 Access Summit



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4. Page Titles and Page Structure

- Make sure every page has an appropriate page title.
- Use logical and semantic page structure as intended (headers, bullets, blockquote, etc.).
- Create a correct reading order that is reflected in code, including a logical tab order.



Add Basic Landmarks and HTML5 Sectioning Elements

- ARIA landmarks identify significant page areas, giving them meaning and making them more keyboard navigable.

```
<div id="maincontent" role="main">  
<div id="navigation" role="navigation">  
<form action="search.php" role="search">
```

- You can also use HTML elements such as <nav>, <main>, and <header>.



5. Color

- Color should not be the only indicator used for information.
 - Color blindness affects 8% of men (1 in 12) and 0.5% of women.
 - Around 25 million men with color blindness in the U.S.
- Check color contrast:
 - WebAIM Color Contrast Checker (<http://webaim.org/resources/contrastchecker/>) or the Colour Contrast Analyser from TPGi (<https://developer.paciellogroup.com/resources/contrastanalyser/>)



Foreground Color

#0000FF



Lightness



Background Color

#FFFFFF



Lightness



Contrast Ratio

8.59:1

[permalink](#)

Normal Text

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

Large Text

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

Graphical Objects and User Interface Components

WCAG AA: **Pass**



Text Input

6. Tables

- Tables should tie column & row headings to data to help users identify which headers go with which pieces of data.

```
<th scope="col">Title</th>
```

```
<th scope="row">Name</th>
```

- Identify table captions.
 - Associate the description with the table by using the <caption> tag as the first tag inside your table markup.

```
<table>
```

```
  <caption>Class Schedule</caption>
```



7. Forms

- Ensure that all users can complete and submit all forms.
- Make sure that a form can be completed just using a keyboard or a screen reader.

Forms - Labels

Hair Type

```
<label for="hair">Hair Type</label>
```

```
<input type="text" name="hair" id="hair">
```



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Forms - Required Fields

Identify required form fields with the HTML5 required attribute.

```
<input type="text" name="username" required  
aria-required="true">
```



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Forms – Radio Buttons & Checkboxes

Wrap radio buttons and checkbox groups with fieldset tags and use a legend tag to provide a group prompt.

Do you love disco?

☐ Absolutely ☐ Disco is Lamé

```
<fieldset>
  <legend>Do you love disco?</legend>

  <input type="radio" name="discolove" id="absolutely" value="Absolutely">
  <label for="absolutely">Absolutely</label>

  <input type="radio" name="discolame" id="lame" value="Disco is lame">
  <label for="lame">Disco is lame</label>
</fieldset>
```



8. Captions and Transcripts

- There are different guidelines for pre-recorded video and live media (video and audio).
- In general:
 - Video and audio should have captions
 - Video should have a description track
 - Video and audio should have a full text transcript



Do you need captions, descriptions, and transcripts?

- Does my media need captions?
<https://www.w3.org/WAI/media/av/captions/#checklist>
- Does my media need descriptions?
<https://www.w3.org/WAI/media/av/description/#checklist>
- Does my media need transcripts?
<https://www.w3.org/WAI/media/av/transcripts/#checklist>





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9. Language Attribute

Because a screen reader pronounces the words aloud, it must first know which language to speak.

```
<html lang="en">
```

```
<span lang="fr">"C'est la vie,"</span> the woman said  
as she walked out of the house forever.
```





Most people today can hardly conceive of life without the Internet. Some have argued that no other single invention has been more revolutionary since Gutenberg's printing press in the 1400s. Now, at the click of a mouse, the world can be “at your fingertips”—that is, if you can use a mouse... and see the screen... and hear the audio—in other words, if you don't have a disability of any kind.

Source: <https://webaim.org/techniques/language/>
Example of English text wrapped with an incorrect lang=“cs” attribute

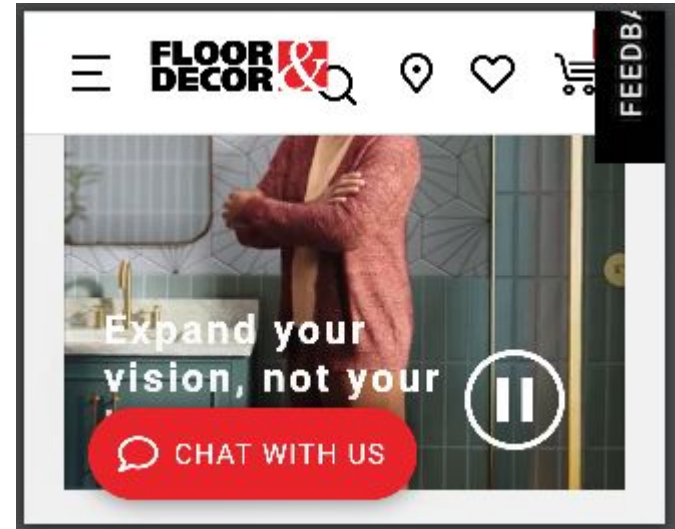


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10. Reflow and Responsive Design

No loss of content or functionality should occur, and horizontal scrolling should be avoided when content is presented at a width of 320 pixels.



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CHAT WITH US


Testing for Accessibility



WebAim WAVE Tool

An easy and free way to check the accessibility of a page on your site

<http://wave.webaim.org>



WAVE

powered by
WebAIM

web accessibility evaluation tool

Address: <https://www.amazon.com>

Styles: OFF ☐ ON ☒

Summary

Summary


Details

Reference


Order

Structure


Contrast

 0


Errors

 0


Contrast Errors

 10


Alerts

 13

Features

 13

Structural Elements

 16

ARIA

View details >

Congratulations! No errors were detected! Manual testing is still necessary to ensure compliance and optimal accessibility.

The following apply to the entire page:

 *en-us*

 h1

amazon



Go

Your Account

Help

Cart






 *aria-label="Devices with Alexa. I

Shop Amazon Devices with Alexa

alexa



h2 Prime Video



h2 Customers' most-loved




Women's fashion



Men's fashion



Beauty



aria-

h2 Best Sellers in Outlet



aXe DevTools from Deque

A browser extension for Chrome, Firefox, and Edge that includes Intelligent Guided Tests to help identify accessibility bugs that can't be caught with automation alone.

<https://www.deque.com/get-started-axe-devtools-browser-extension/>

DevTools axe-core 4.9.0 Sign up / Sign in

Overview **Guided Tests**

Test Name Save Test

Test URL Re-run scan

<https://www.amazon.com/>

TOTAL ISSUES

134

Automatic Issues	134
Guided Issues	0
Manual Issues	0
Needs Review	55
Best Practice	60
Critical	9
Serious	11
Moderate	23
Minor	36

Best Practices: **ON** WCAG 2.1 AA

Total Issues: 134

Elements must only use permitted ARIA attributes

5

Required ARIA attributes must be provided

8

Images must have alternate text

1

Links must have discernible text

1

Highlight

Share Issue

1 of 1

Ensures links have discernible text

[more information](#)

Element Location: `.clickthrough`

```
<a style="cursor:pointer;display:block" class="clickthrough" href="https://advertising.amazon.com/grow-your-brand?aref=zlGoi307Jv&amp;aaxitk=7db4dcdeb6e3d597b45460ed001ba127" target="_top">
```

To solve this problem, you need to fix at least (1) of the following:

- Element does not have text that is visible to screen readers
- `aria-label` attribute does not exist or is empty
- `aria-labelledby` attribute does not exist, references elements that do not exist or references elements that are empty
- Element has no `title` attribute

Intelligent Guided Tests



Table ?

Runs: 0

Total issues: 0

The table tool will guide you through testing a table.



Keyboard ?

Runs: 0

Total issues: 0



Modal Dialog ?

Runs: 0

Total issues: 0



Guided Testing: Table

1

2

3

What type of data table is this?

Tabular data is structured into rows, each of which contains information relating to the purpose of the table. Each table row contains the same number of cells (some may be empty), which provide values of properties of the thing described by the row.



A table with 1 row of headers



A table with 1 column of headers



A table with 1 header row and 1 header column



A table with irregular headers. A table can have irregular headers when the header cells are associated with specific ranges of cells rather than an entire row or column.



A table with multi-level headers. Multi-level headers are used

BACK

NEXT



Element selector

Manual Testing

- The best way to ensure accessibility and should always be done along with automated testing.
- You can do a lot of testing on your own, but it does take time and you need to learn how to use tools such as a screen reader.
- Try using your website using only a keyboard, in monochrome, zoomed in, and with a screen reader.
- Work with an accessibility testing company.

Summing it Up

- Get to know the WCAG AA guidelines.
- There are some simple accessibility techniques you can start implementing on your websites now.
- You should start testing your website using simple tools today and always test manually.

Accessibility is about people.

Thank You! Questions?

Today's slides,
a website accessibility
how-to guide, and more:
mightycitizen.com/accessibility



Thank You!



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