2022 TSAE Membership,Marketing & Communications Conference

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:

- Understand what web accessibility is—and why it matters.
- Meet the ADA, Section 508, and WCAG accessibility requirements.
- Implement accessibility best practices on your site
- Test your website for accessibility.

What is Web Accessibility?

Websites, apps, and digital technologies that are designed and developed so people with disabilities can use them.

Accessibility Statistics

61 million Americans (26% of adults in the U.S.) have some type of disability (CDC).

39M

motor impairment

53M

cognitive, mental, or emotional impairment

12M

vision impairment

30M

hearing impairment

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75% of adults living with a disability use the Internet daily.

The aging population is predicted to triple to 1.6 billion by 2050.

It's the Law, Y'all!

- ADA
- Section 508 of the Rehabilitation Act of 1973 (updated in 2017)
- State Guidelines

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True or False:

The ADA requires websites to be accessible to people with disabilities?

Title III of the ADA

- Prohibits discrimination against someone with a disability in places of public accommodation.
- Does not enforce a particular set of accessibility standards or guidelines.

2,895

businesses in the U.S. were sued over website accessibility in federal courts in 2021.

Section 508

Section 508 Guidelines

- Section 508 of the Rehabilitation Act of 1973 is the law governing accessibility of information technology (IT) in the federal government.
- Updated in 2017.

Web Content Accessibility Guidelines (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

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.
   - In, Within, Through, Out.

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.

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10 Basic Accessibility Techniques

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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 it an extremely long URL that they have to listen to.

- If an image is the only thing within a link tag, it must have alternative text in the alt tag.

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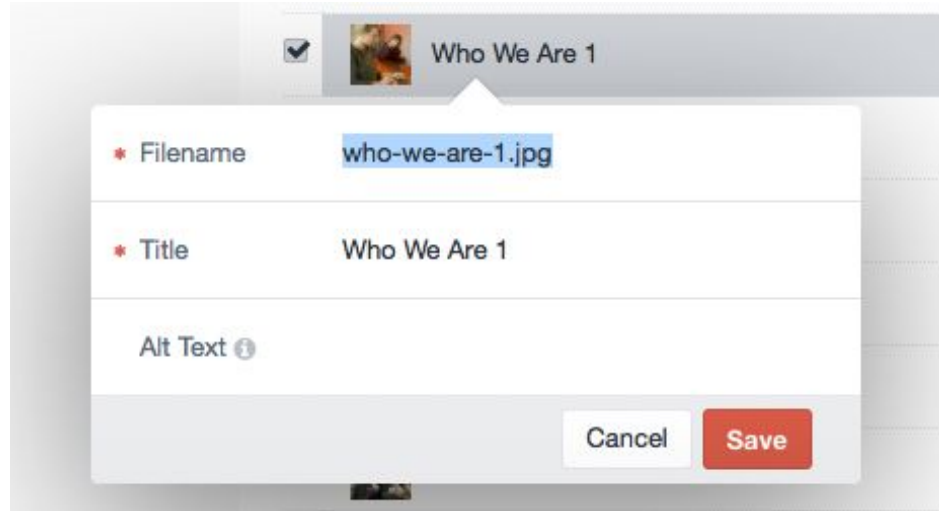
- An ALT Tag is an HTML attribute applied to image tags to provide a text alternative for the image.

```
<img src="thisimage.jpg" alt="Alternative Text"/>
```

- Add meaningful ALT text for images that need to convey meaning.

- If an image does not need to convey meaning, 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.
  - Good ALT text depends heavily on the context of the image.

- ALT text should not be redundant.
  - It should not be the same as adjacent text, caption, body text, etc.

- ALT text should not use the phrases "Image of …" or "Graphic of …" to describe the image.
  - It will be apparent that this is an image.

Context is everything.

Campus Destinations

Spend just a minute on our campus and you'll quickly see how The University of Texas at Austin is an immense and beautiful world all its own. And with our dozens of museums, libraries, centers, institutes and special venues spread across the campus and the city, each with its own unique exhibits and programming, you'll never be bored.

See what's on campus >   Look Around Virtual Tour >

alt="Gregory Gym Aquatic Complex"

alt="Outdoor, resort-style pools at the Gregory Gym Aquatic Complex"

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Gummy Burger

Flavor(s) :Orange / Lemon / Cherry / Sour Apple

$7.99

Our original juicy burger comes complete with cheese and lettuce on a delicious gummy bun, each individually flavored! This made-in-the-USA Gummy Burger is 9 1/4" x 2 1/2" and approximately 7oz.

Quantity: 1 🛒 Add to Cart

SHOP BY YOUR FAVORITE FLAVOR

3. Keyboard Access

- Make sure that all functional elements can be reached and activated using a keyboard.
  - In, Within, Through, Out
- Make sure that the tab order is logical.
- Keyboard focus should be clearly visible to sighted keyboard users.

4. Page Structure and Reading Order

- Many web applications for accessibility rely on the underlying structure of your page to communicate the content.
- Use logical and semantic page structure as intended (headers, bullets, blockquote, etc.).
- Make sure every page has an appropriate page title.
- Create a correct reading order that is reflected in code, including a logical tab order.

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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/) (http://webaim.org/resources/contrastchecker/)

  - [Color Contrast Checker](https://www.tpgi.com/color-contrast-checker/) from TPGi (https://www.tpgi.com/color-contrast-checker/)

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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.
  - Use the TAB key to test!

- Ensure that every form element (text field, checkbox, drop-down list, etc.) has a label and make sure that label is associated to the correct form element.

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Forms - Labels

Hair Type

```
<label for="hair">Hair Type</label>
<input type="text" name="hair" id="hair">
```

Forms - Fields with Requirements

Required fields, fields with special formatting, or other unique parts of the form must have clear instructions.

- Provide instructions before the form.
- Tell the user exactly what they need to enter.
- Give instructions in the label (not in the placeholder).

Your Birthdate

MM/DD/YYYY

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8. Captions and Transcripts

- Videos and audio must have captions *and* a transcript.

- The video player must be accessible to keyboard-only and screen reader users.

- YouTube allows you to add captions to videos using their tools.

- Use a separate description track to describe what's happening in the video.

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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 his house forever.
```

Example: English text wrapped with an incorrect lang="cs" attribute

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.

WebAim WAVE Tool

An easy and free way to check the accessibility of a page on your site http://wave.webaim.org.

WAVE

web accessibility evaluation tool

powered by [WebAIM](#)

Address: amazon.com

Styles: OFF ⬤ ON

Details

Summary	Details	Reference	Structure	Contrast

❌ 4 Errors

- ☑ 1 X Missing alternative text
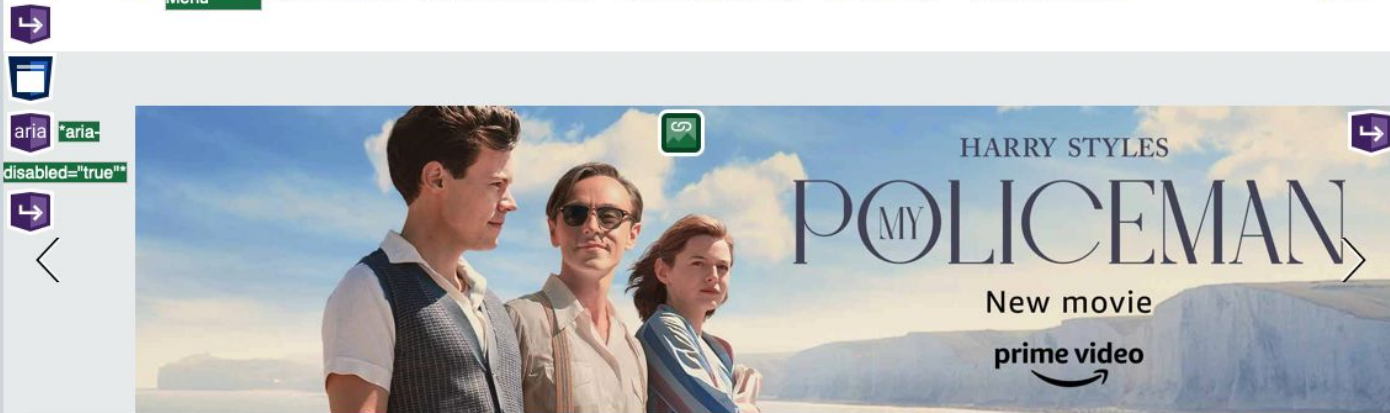- ☑ 1 X Empty link
- ☑ 2 X Broken ARIA menu

◐◑ 2 Contrast Errors

- ☑ 2 X Very low contrast

⚠ 241 Alerts

- ☑ 48 X Redundant alternative text

The following apply to the entire page:

🌐 *en-us* h1⚠

Skip to main content ↵

amazon 🏷 *aria-label="Amazon"* Hello Select your a 🔍 ᴬ↵ 💬 *aria-describedby="searchDropdownDescription"* 🏷⚠ 🔴✕ 🏷

All 🏷 aria-label="Op Menu"* Sellers ↵ Amazon Basics ↵ Customer Service ↵ Prime ↵ Today's Deals ↵ **Watch fall favorites** ↵

↵

aria *aria-disabled="true"* ↵ 🔗

HARRY STYLES

MY POLICEMAN

New movie

prime video

‹ ›

h2 **Gifts under $10**

h2 **Fall styles for everyone**

h2 **Party dresses in sizes 14+**

aXe from Deque

A free browser extension for Firefox or Chrome

https://www.deque.com/products/axe/

axe ⓘ

Violations found	35	Run again
Needs review	61	show: all ▾

Active <area> elements must have alternate text	1
Elements must have sufficient color contrast	75
<html> element must have a lang attribute	1
Links must have discernible text	2
Elements should not have tabindex greater than zero	17

Elements must have sufficient color contrast

</> Inspect Node   ⚙ Highlight

Issue description

Ensures the contrast between foreground and background colors meets WCAG 2 AA contrast ratio thresholds

Impact: **serious**

⎘ Learn more

Element location

```
#a071e65f > .a-list-item > .deals-shoveler-card > .deals-
shoveler-card-bottom > div:nth-child(3) > div.gw-clock
```

Element source

```
<div class="gw-clock" aria-hidden="true">Ends in
10:18:36</div>
```

To solve this violation, you need to:

Fix the following:
Element has insufficient color contrast of 3.1 (foreground color: #879596, background color: #ffffff, font size: 9.8pt, font weight: normal). Expected contrast ratio of 4.5:1

Related node:
</> Inspect

```
#deals-shoveler-ns_W215Z2QG6R4GPDJ78EKW_4572_
```

Sortsite

A reasonably priced full site scanner

https://www.powermapper.com/products/

Errors | **Accessibility** | Compatibility | Search | Standards | Usability

This tab shows accessibility issues, indicating problems for older users, people with disabilities or accessibility needs. Automated testing cannot detect all accessibility iss so should be used alongside human testing.

Level	WCAG 2	Section 508 - 2000	Section 508 - 2017	Key
A	🔴	🔴	🔴	🔴 Pages with level A issues are unusable for some people
AA	🟠		🟠	🟠 Pages with level AA issues are very difficult to use
AAA	🟠			🟠 Pages with level AAA issues can be difficult to use

Priority	Description and URL	Guideline and Line#	Count

Level A

15 issues on 8 pages

▽ 🔴	All fields in a group of input fields (for example phone numbers) need a label.	WCAG 2.0 A F86 Section 508 (2017) A F86	1 pages
	Add a LABEL element or TITLE attribute for each field, and if required, use CSS to hide the label from sighted users.		
	https://www.amazon.com/ap/signin? _encoding=UTF8&ignoreAuthState=1&openid.assoc_handle=usflex&openid.claimed_id=http%3A%2F%2...	Line 298	
▷ 🔴	AREA elements must have an ALT attribute.	Section 508 (2000) 1194.22 (a) WCAG 2.0 A F65 Section 508 (2017) A F65	7 pages

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, or with a screen reader.

- Work with an accessibility testing company.

Summing it Up

- Accessibility is important not only because there are laws requiring compliance, but because it affects so many people.

- There are a few things you can start implementing on your websites now.

- You should start testing your website using simple tools today and always test manually.

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Accessibility is about people.

Questions?

Get the Slides and a Web Accessibility Guide:

mightycitizen.com/accessibility

Bonus tools and templates:

mightycitizen.com/tools

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Thank You!

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