



## Free Web Evaluation Tools: What They Can (and Can't) Do

Session Begins 1:00 pm CST  
 Periodic Audio Testing Occurring

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## Useful Keyboard Shortcuts

- Full list - *Keyboard Shortcuts* from the *Help* menu on the Menu Bar.
- Chat: Move cursor to the Message text box
  - Windows: Ctrl+M
  - Mac: Command-M
- Speaker level Up:
  - Windows: Ctrl+Alt+Up Arrow
  - Mac: Command-Option-Up Arrow
- Speaker level Down:
  - Windows: Ctrl+Alt+Down Arrow
  - Mac: Command-Option-Down Arrow

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## More keyboard shortcuts

- **Open Closed-Captioning window**

Windows:     Ctrl+F8

Mac:           Command-F8

- **Close Closed-Captioning window**

Windows: Alt+F4 or Ctrl+W

Mac:        Command-W

## Listening to the Webinar

- The audio for today’s webinar is being broadcast through your computer. Please make sure your speakers are turned on or your headphones are plugged in.
- You can control the audio broadcast via the Audio & Video panel. You can adjust the sound by “sliding” the sound bar left or right.
- If you are having sound quality problems check your audio controls by going through the Audio Wizard which is accessed by selecting the microphone icon on the Audio & Video panel.



## Listening to the Webinar, *continued*

- If you do not have sound capabilities on your computer or prefer to listen by phone, dial:

- **1-712-432-3066**
- **Pass Code:**
- 148937

• This is **not** a Toll Free number

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## Listening to the Webinar, *continued*

MOBILE Devices supported include iPhone, iPad, Android Devices, Kindle Fire HD)\*\*

Individuals can download the free Blackboard Collaborate App from the Apple Store, Google Play or Amazon



\*\*Closed Captioning is not visible via the Mobile App and there is limited access to the white board for individual's using voice over technology

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# Captioning

- Real-time captioning is provided during this webinar.
- The caption screen can be accessed by choosing the  icon in the Audio & Video panel.

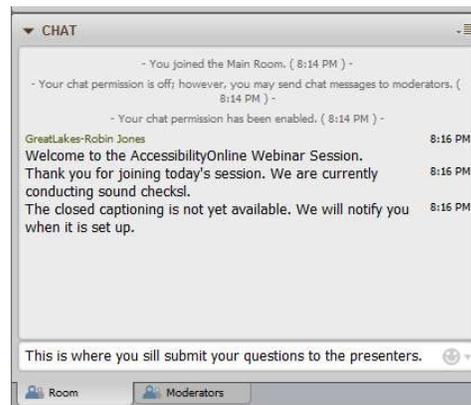


- Once selected you will have the option to resize the captioning window, change the font size and save the transcript.

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# Submitting Questions

- You may type and submit questions in the Chat Area Text Box or press Control-M and enter text in the Chat Area
- If you are connected via a mobile device you may submit questions in the chat area within the App
- If you are listening by phone and not logged in to the webinar, you may ask questions by emailing them to [webinars@ada-audio.org](mailto:webinars@ada-audio.org)
- **Please note:** This webinar is being recorded and can be accessed on the website at [www.ada-audio.org](http://www.ada-audio.org) within 24 hours after the conclusion of the session.



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## Customize Your View

- Resize the Whiteboard where the Presentation slides are shown to make it smaller or larger by choosing from the drop down menu located above and to the left of the whiteboard. The default is “fit page”
- Resize/Reposition the Chat, Participant and Audio & Video panels by “detaching” and using your mouse to reposition or “stretch/shrink”. Each panel may be detached using the icon in the upper right corner of each panel.

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## Setting Preferences

- Depending on your system settings you may receive visual and audible notifications when individuals enter/leave the webinar room or when other actions are taken by participants. This can be distracting.
- To turn off notifications (audible/visual)
  - Select “Edit” from the tool bar at the top of your screen
  - From the drop down menu select “Preferences”
  - Scroll down to “General”
    - select “Audible Notifications” Uncheck anything you don’t want to receive and “apply”
    - Select “Visual Notifications” Uncheck anything you don’t want to receive and “apply”
  - For Screen Reader User – Set preferences through the setting options within the Activity Window (Ctrl+slash opens the activity window)

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## Technical Assistance

- If you experience any technical difficulties during the webinar:
  1. Submit a message regarding your issue via the chat area and the Moderator will address your concern via a private chat with you and/or refer it to one of the Great Lakes ADA Center IT Staff to contact you off line; or
  2. Email [webinars@ada-audio.org](mailto:webinars@ada-audio.org); or
  3. Call 877-232-1990 (V/TTY)

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## Free Web Evaluation Tools: What They Can (and Can't) Do

Speaker Julie Brinkhoff, Great Plains ADA Center

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# Hello!

**Julie Brinkhoff**

Great Plains ADA Center

brinkhoffj@missouri.edu

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## This session will cover:

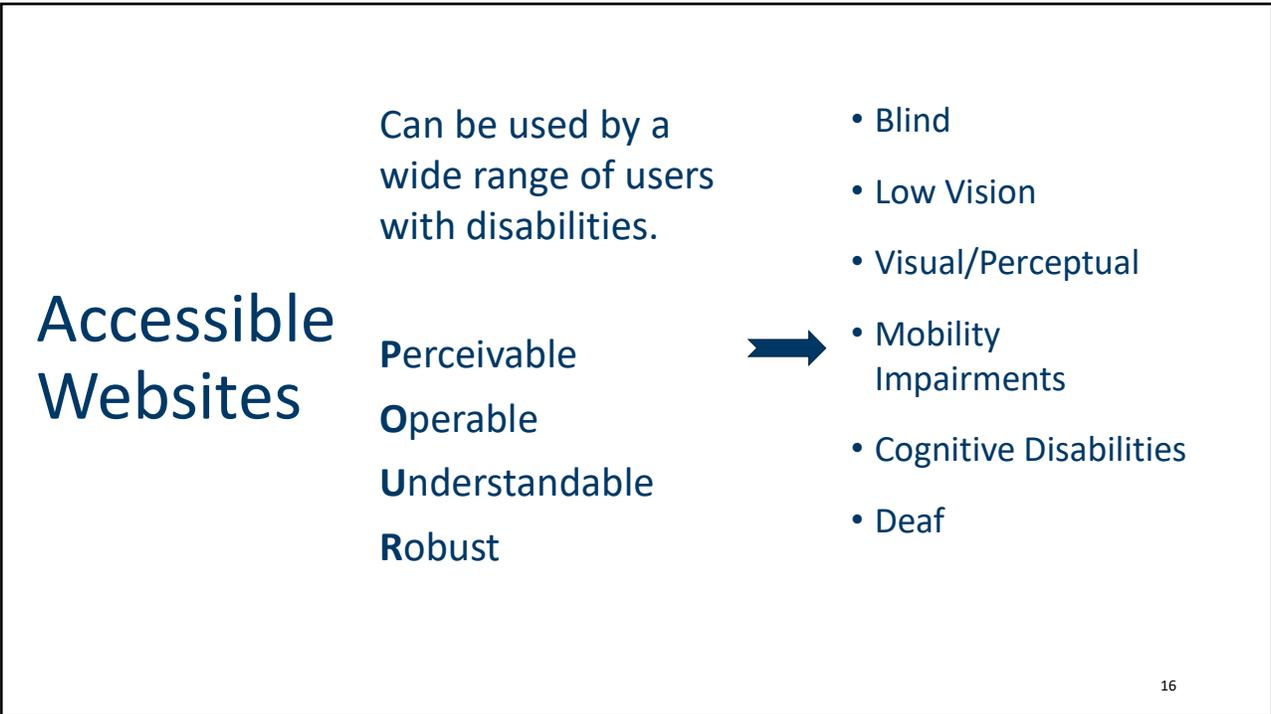
- Explore some common on-line (usually free) tools that can be used to evaluate different types of web accessibility.
- Discuss what can be evaluated with a validation tool and what still requires human judgement.
- Discuss building evaluation into the development process and use as learning tools.

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# This session will not cover:

- More complex accessibility "scanners" designed to scan numerous pages and provide more complex overall reports.
- Coding techniques to "fix" accessibility errors.
- Advanced information on this topic. This is a basic session designed for audience with basic or no knowledge of web accessibility.

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Accessible websites meet needs of multiple types of users.

A website could be extremely accessible to screen reader users.

But not accessible to anyone else!

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## Example:

**Great for a screen reader user.**

If coded correctly for a screen reader, a user who is blind should have no difficulty accessing this content through a screen reader, because the screen reader reads the text in the code.

**Not so much for anyone else.**

Although probably not easy to read for most people, a user who needs strong contrast may find this content impossible to read.

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Accessible websites meet needs of multiple types of users.

Use of multiple types of evaluation is critical.

Or one web accessibility evaluation tool that evaluates multiple criteria.

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So what can we evaluate with these tools?

- Conformity to a web standard. (Accessibility Validation Tools)
- Evaluation of one specific area such as color contrast.
- Emulating the experience of a user

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## Conformity to a Web Standard

The most common web standards right now are Section 508 and Web Content Accessibility Guidelines v2 or (**WCAG v2**)

This session will refer to WCAG v2.

Let's take a look! <http://webaim.org/standards/wcag/checklist>

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Online validation tools can identify many "checks" that aren't met ,  
but...



- They can't do EVERYTHING. Will always need to apply human judgement and feedback from users.
- No "superheros" out there.

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# Let's look at one free on-line Web Accessibility Tool

## Web Accessibility Validation Tool (WAVE)

Developed and powered by WebAIM

<http://wave.webaim.org/>

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### Wave Tool Bar

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Home About Us Resources Members FAQs

## ADA Resources Designed For You!

This site provides Boone County businesses with clear concise information on the Americans with Disabilities Act in user friendly formats.

A Service of the Columbia Employment Consortium

### Did You Know?

**Abilities for Business**

Abilities for Business.com is a free online resource that helps connect quality, qualified job applicants and employers through one portal.

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### Did You Know?

**Abilities for Business**

Abilities for Business.com is a free online resource that helps connect quality, qualified job applicants and employers through one portal. [Learn more about this Mid Missouri resource.](#)

**Job coaching** is a proven strategy to save businesses time and money in training and retaining new employees. Find out how your business can benefit from on-site job coaching! [Learn more.](#)

**Tax credits and deductions** are available to small businesses who make modifications to their buildings, purchase equipment or provide services such as interpreters for employees with disabilities. [Learn more.](#)

Columbia Employment Consortium  
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We are comprised of organizations in Boone County that provide recruitment and retention services to local businesses and employment services to people with disabilities. CEC organizations have worked with numerous Boone County employers to find and retain employees while helping individuals with disabilities become part of the workforce.

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# h1 ADA Resources Designed for You!

h2 This site provides Boone County businesses with clear concise information on the Americans with Disabilities Act in user friendly formats.

A Service of the Columbia Employment Consortium

### h3 Did You Know?



Abilities for Business Logo Abilities for Business.com is a free online resource that helps connect quality, qualified job applicants and employers through one portal. [Learn more about this Mid Missouri resource.](#)



Job coaching is a proven strategy to save businesses time and money in training and retaining new employees. Find out how your business can benefit from on-site job coaching! [Learn more..](#)



Tax credits and deductions are available to small businesses who make modifications to their buildings, purchase equipment or provide services such as interpreters for employees with disabilities. [Learn more..](#)



Columbia Employment Consortium

www.adasymposium.org

Styles No Styles Contrast

### Details

Filter: WCAG 2.0 AA

- Errors (3)**
  - 1 X Linked image missing alternative text
  - 2 X Broken ARIA reference
- Alerts (8)**
  - 7 X Redundant link
  - 1 X Redundant title text
- Features (56)**
  - 4 X Alternative text
  - 51 X Linked image with alternative text

### Documentation



**Errors**  
**Broken ARIA reference**

**What It Means**  
An aria-labelledby or aria-describedby reference exists, but the target for the reference does not exist.

**Why It Matters**  
ARIA labels and descriptions will not be presented if the element referenced does not exist in the page.

**How to Fix It**  
Ensure the element referenced in the aria-labelledby or aria-describedby attribute value is present within the page and presents a proper label or description.

**The Algorithm... in English**  
An element has an aria-labelledby or aria-describedby value that does not match the id attribute value of another element in the page.

**Standards and Guidelines**

- [1.3.1 Info and Relationships \(Level A\)](#)

[Icon index](#)

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## Assessment: What WAVE did and didn't do

<p><b>Did Well</b></p> <ul style="list-style-type: none"> <li>• Found images with missing alt tags</li> <li>• Present webpage in content order.</li> <li>• Let you look at the structural mark-up.</li> <li>• Well</li> </ul>	<ul style="list-style-type: none"> <li>• Identified possible problems with redundant links.</li> <li>• Identified passing color contrast.</li> <li>• Provides "skip navigation" links.</li> <li>• Shows accessibility features like ARIA</li> </ul>
---	---

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## Assessment: What WAVE did and didn't do

### Didn't Do

- Determined if alternative text and/or use of null tag was appropriate.
- Tell if content order was logical.

- Can get pretty close to assessing structural mark-up—but not quite.
- Cannot tell if website can be accessed using keyboard only.

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## Let's look at alternative checks for some of these items. Keyboard Navigation

- Keyboard focus should be a border or highlight that shows how you move through the webpage.
- You can check this simply by using your own keyboard **without** relying on the mouse.
- Tab key to move through site.
- Shift-Tab to go backwards
- Return to select a link, etc.
- Let's try it out!



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## Let's look at alternative checks for some of these items. Keyboard Navigation

- User needs to be able to tab away from all elements that are tabbed into—such as media controls.
- When users cannot tab out of an element, it is called a “**keyboard trap**”.

Also pay special  
attention to forms!

Let's try one.



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## Let's look at alternative checks for some of these items. Keyboard Navigation

- **Keyboard navigation through a website is one of the most overlooked accessibility checks!!**
- Great resource to help with this manual check:
- <http://webaim.org/techniques/keyboard/>

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# Keyboard Navigation

Navigate to most elements	<ul style="list-style-type: none"> <li><b>Shift</b> + <b>Tab</b> - navigate backward</li> </ul>	<ul style="list-style-type: none"> <li>Keyboard focus indicators must be present.</li> <li>Navigation order should be logical and intuitive.</li> </ul>
Link	<b>Enter</b>	
Button	<b>Enter</b> or <b>Spacebar</b>	Ensure elements with ARIA <code>role="button"</code> can be activated with both key commands.
Checkbox	<b>Spacebar</b> - check/uncheck a checkbox	Checkboxes should be used when one or more option can be selected.
	<ul style="list-style-type: none"> <li><b>↑</b>/<b>↓</b> or <b>←</b>/<b>→</b> - select an option</li> </ul>	

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## Let's look at alternative checks for some of these items. **Alternative Text**



**Alternative text for graphics should convey relevant content.**

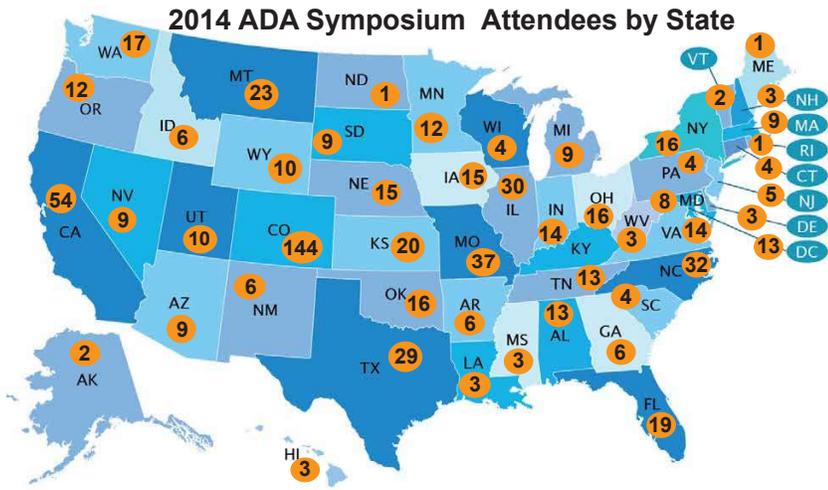
**The alternative text for this image focuses on the meaning the picture should convey.**

“The image shows a toddler pulling on his ear, a common behavior when children have earaches.”

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Let's look at alternative checks for some of these items.  
**Alternative Text**

A table as well as an image may be best way to convey this information.



Let's look at alternative checks for some of these items.  
**Alternative Text**

Looking at your website without graphics can provide information about the content screen reader users and others are getting –or not getting.

# Accessibility features of browsers. Do they work on your site?

**Modern browsers have built-in accessibility features.**

- User' s can use their own style sheets
- Can increase font size
- Can change color to grayscale
- Change screen to high contrast or yellow/black screen.
- Let' s try one of these out.



Chrome Accessibility

Extensions to improve your Chrome experience

## High Contrast is Enabled

**Disable**  
(⌘+Shift+F11)

Color scheme for **www.adasymposium.org**:  
(⌘+Shift+F12):

- Normal
- Increased Contrast
- Grayscale
- Inverted Color
- Inverted Grayscale
- Yellow on Black

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# National ADA Symposium

## May 14-17, Chicago Hyatt Regency O'Hare

Features	Registration Fees	Venue Information						
80 Break-out Sessions Pre-Conference Sessions Welcome Reception Free Wi-fi Two full breakfasts and lunches provided.	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black;"><b>By March 31st</b></td> <td style="border-bottom: 1px solid black;"><b>\$750</b></td> </tr> <tr> <td style="border-bottom: 1px solid black;"><b>After March 31st</b></td> <td style="border-bottom: 1px solid black;"><b>\$900</b></td> </tr> <tr> <td colspan="2"><b>Registration closes April 30th.</b></td> </tr> </table>	<b>By March 31st</b>	<b>\$750</b>	<b>After March 31st</b>	<b>\$900</b>	<b>Registration closes April 30th.</b>		<b>Hyatt Regency O'Hare</b> 9300 Bryn Mawr Avenue Rosemont, Illinois 60018 1 847 696 1234
<b>By March 31st</b>	<b>\$750</b>							
<b>After March 31st</b>	<b>\$900</b>							
<b>Registration closes April 30th.</b>								

**REGISTER TODAY**

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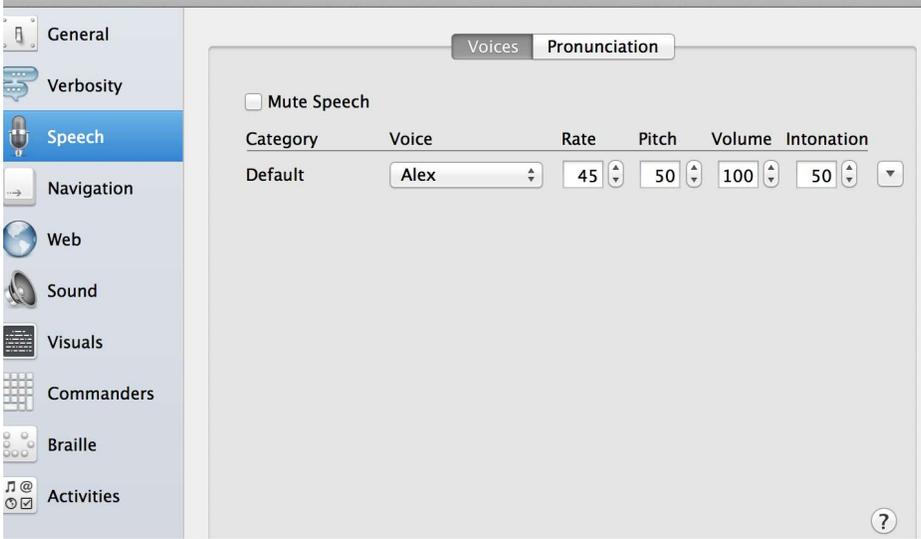
REGISTER TODAY

## How does my site actually “read” using assistive software.

- Using your computer’s Text to Voice feature is one way.
  - I use the Text to Voice feature on a MAC
- Screen Reader simulators
- **Note:** This is helpful, but not a substitute for a check by a screen reader user!

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## Speech Location



The screenshot displays the Windows Speech Recognition settings window. The 'Speech' category is selected in the sidebar. The 'Pronunciation' tab is active, showing a 'Mute Speech' checkbox and a table of voice settings. The table has columns for Category, Voice, Rate, Pitch, Volume, and Intonation. The 'Default' category is set to the 'Alex' voice, with a Rate of 45, Pitch of 50, Volume of 100, and Intonation of 50. A help icon (?) is visible in the bottom right corner of the settings window.

Category	Voice	Rate	Pitch	Volume	Intonation
Default	Alex	45	50	100	50

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## Screen Reader Resources

### Resources

- <http://webaim.org/simulations/screenreader-sim.htm>
- <http://webaim.org/articles/jaws/>
- <http://webaim.org/articles/nvda/>

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Helpful on-line tools for specific features.

## Checking Color Contrast

- **Lea Verou's Contrast Ratio**
- <http://leaverou.github.io/contrast-ratio/>
- **When checking color contrast-don't forget to consider how hover colors will look over text.**

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Contrast Checker for text and background.

Background: #ffffbe 20.3 #000000 Text

How to use

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## Example of Contract Checker in Action

When semi-transparent colors are involved as backgrounds, the contrast ratio will have an error margin, to account for the different colors they may be over.

This sample text attempts to visually demonstrate how readable this color combination is, for normal or **bold** text of various sizes and font styles.

**Hint:** Press the up and down keyboard arrows while over a number inside

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## Content Managed Systems: Some things to know.

- Me, when I was doing my own HTML and CSS and had total control of my websites.



Me, now that I am trying to make sure new content managed systems are accessible.



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## What Happened?

### What Happened?

- Did not pay enough attention to ALL of the structural features of the system.
- Was not involved enough in accessibility evaluation **throughout** the development process.
- Did not spend enough time testing the effect of entering and changing content on accessibility.

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## Wave Example

### What Happened?

Here's an example. Let's go back to WAVE.

<http://wave.webaim.org/>

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## Research

Take the time to really research your content managed system **before** development even starts.

<https://make.wordpress.org/accessibility/2016/03/21/wordpress-goes-wcag/>

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## Content Management System Elements

Content managed systems or word press themes will have elements or features that appear on every page. No need to check every page—the feature will work the same way on each page.

Footers

Headers

Slide Banners

Calendars

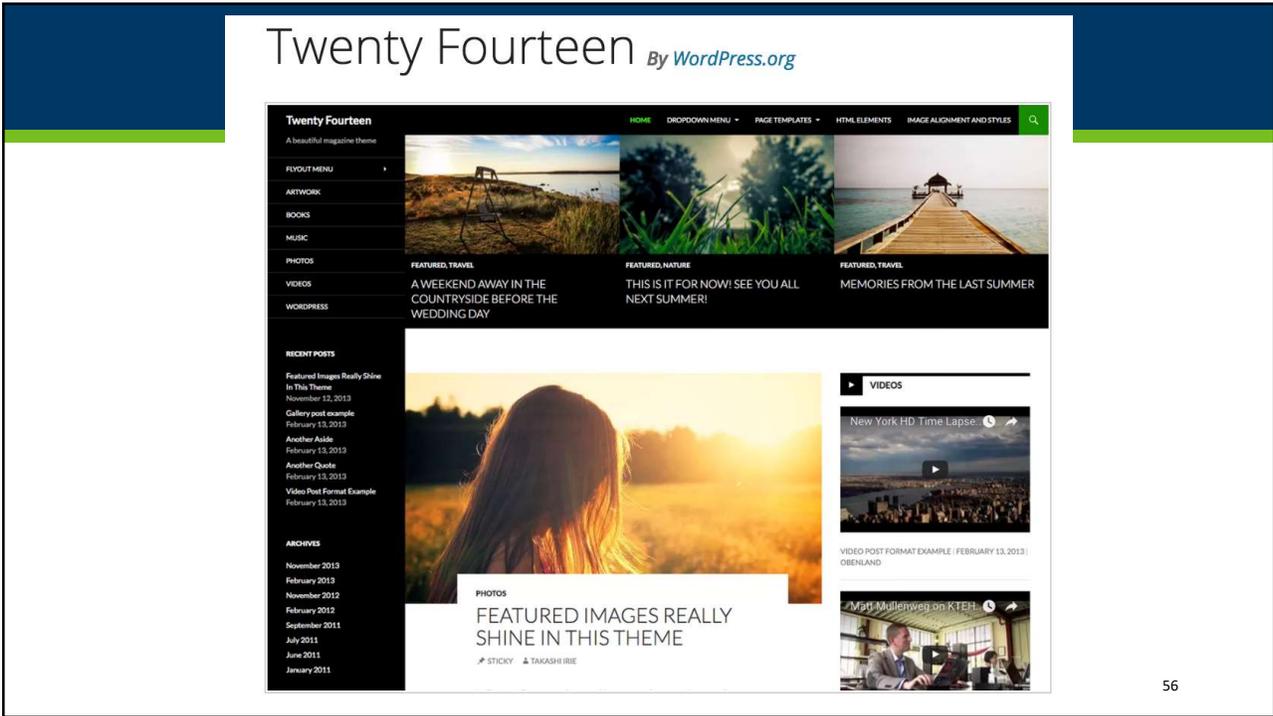
Plug-Ins

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## Content Managed Systems: Data Points

- 27% of websites use a word press theme or platform!
- Word press themes from 2016 on have improved accessibility.
- Filter your selection choice by “accessibility ready”.
- Word Press recommends their TwentyFourteen theme.

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## Resources

- [www.webaim.org](http://www.webaim.org)
- <https://www.w3.org/standards/webdesign/accessibility>
- [Web Accessibility Evaluation Tools List](#)

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## QUESTIONS

You May Type and Submit questions in the Chat Area Text Box or press Control-M and enter text in the Chat Area

**Free Web Evaluation Tools: What They Can (and Can't) Do**

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Thank You For Your Attention!

**Julie Brinkhoff**

Great Plains ADA Center

brinkhoffj@missouri.edu

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The session today was recorded  
and will be archived at  
**[www.ada-accessibletech.org](http://www.ada-accessibletech.org)**

**Our Next Session is *July 20, 2017***  
**Planning & Producing Accessible Videos for Web, Social Media & eLearning**

*Accessible Technology Webinar Series is Sponsored by the Great Lakes ADA Center and  
the Pacific ADA Center, members of the ADA National Network.*

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