Accessibility for Digital Content Managers and Content Creators

Jessica S. Sams

Creating content that will end up on a website is part of many job descriptions. Content creators may not have had specific training in writing content that is digitally accessible, although awareness is growing that digital content should pass accessibility audits to steer clear of potential litigation. To better understand the basics of accessibility, we'll first learn about categories of disability and the assistive technologies used to access content. Then we will learn how to build documents with better accessibility from the start. We will see that content management systems all have similar abilities to enhance accessibility to web page content as well.

Class Action Lawsuits

In January of 2019, a class action lawsuit was filed against Beyonce's company Parkwood Entertainment (Tariq, 2019). Her website beyonce.com is inaccessible to the vision impaired because there are many images on the site that don't have alternative text for assistive technology to read aloud. There were other accessibility problems cited such as not being able to tab through content or access some navigation elements with the keyboard. These types of lawsuits are gaining momentum and it is becoming a cottage industry for people with disabilities to sue website owners over inaccessible content. Stories like this can fuel your WHY in regards to taking your first steps to make your content accessible if you haven't already, but even if we legally don't have to implement it, accessibility is just the right thing to do.

The Guidelines

Federal government websites and federally-funded websites need to be compliant with Section 508 of the Rehabilitation Act of 1973. Web developers usually shorten that to just "Section 508." State government websites and state-funded websites need to maintain compliance with the Web Content Accessibility Guidelines, or WCAG. Developed and maintained by the World Wide Web Consortium (W3C), WCAG is also ISO standard 40500, and an adopted European standard EN 301 549. They are sets of guidelines for website creators to be able to produce accessible content (W3C, 2018).

Categories of Disability

For the purposes of digital accessibility, the four main categories of disability are visual, auditory, motor, and cognitive. When creating content for the web, try to remember to write and design with all of these categories in mind.

Visual

The visual category includes not only blindness, but low vision and color blindness ("Section 508," 2000). People who are blind use the web with an assistive technology called a "screen reader." This is a general class of software that reads web content aloud as people use the keyboard to navigate the web. People with blindness are not using a mouse to interface with the web, so content must be able to be accessed by keyboard only. The refreshable braille display is an amazing device that uses the screen reader software to translate the content in the browser into braille by raising and lowering plastic pins to form braille characters. Even if a CMS template passes all the accessibility tests, that website is only as accessible as the content that is put into it. If you aren't describing what is in your images with alt text, then devices like this cannot describe the image to a blind user.

People with low vision commonly use screen magnifiers to increase the zoom level beyond what's normal on browser toolbars. They need sharp color contrast to discern details.

Color vision deficiency, commonly called color blindness, affects 8% of men and half a percent of women (What Is Color Blindness?" 2020). A simplified way of describing it is that people with this condition cannot discern between either red and green or between blue and yellow. But really, their whole color spectrum is experienced differently. On the web, people with color vision deficiency benefit from pattern in conjunction with color to discern differences in infographics, maps, and data visualizations.

Auditory

This category is comprised of people who are deaf or hard of hearing. People who are non-hearing cannot access certain spoken content on videos, such as voice overs, without closed captions. I've interviewed a few people from the deaf community, and they say that they would prefer an American Sign Language interpreter for spoken content. Think of ASL as another language just like Spanish or Mandarin. Are you offering ASL versions of your video content? Not all of us can afford to do that. Budget is certainly a consideration, so we do our closed captions.

YouTube generates automatic captions from the audio of your uploaded video. In the past, it was not accurate, but there have been huge improvements in these auto-captions in the last two years. The automatic captions are very accurate now, but you still do need to go into the editor and add punctuation and check spelling on names. This is free in YouTube.

Having the closed captions appear synchronously with the audio track in the video satisfies one of the WCAG requirements.

Motor

When we talk about the motor disability category, we include not only paralysis and all the conditions that cause it, but also temporary conditions such as broken bones and whatever limits fine motor skills such as carpal tunnel syndrome, arthritis, and many others.

People with motor disabilities such as paralysis are using the web with many different types of assistive technologies, and they may or may not be able to use a mouse. One type of tool that is used is a mouth stick, which is gripped in the mouth, allowing keyboard use one button at a time. The head button or a sip and puff switch are versions of an on/off toggle to allow web navigation. With a sip and puff device, a sip of air through the mouthpiece tells the computer to do one action, and a puff of air into the mouthpiece tells the computer to do a different action. There are many more types of assistive technology for motor disabilities, such as eye tracking and voice recognition. WebAIM.org offers a more detailed look at them.

Cognitive

The cognitive disability category is broad and can cover such varied conditions as dyslexia, the autism spectrum, ADHD, traumatic brain injury, and short-term memory loss. Here are some things to consider when planning web content to be accessible for this category.

There is a special font available called Dyslexie to enable people with dyslexia to read more easily (Dyslexie, 2020). Sometimes a website will offer a font switcher button so users can either make the font very large or change it to Dyslexie. Also, make sure color contrast is strong enough on small and large text. Pay special attention to form design to make sure form field labels are near the input fields. Use plain language web writing, and ensure animations help users complete tasks instead of distracting them from completing tasks.

What is Accessibility?

Digital accessibility ensures that a wide variety of users can successfully access the content in your website. WebAIM states: "The techniques and guidelines of web accessibility were not invented to make life hard for web developers. They were invented to make life easier for people with disabilities." The world wide web consortium uses the Acronym POUR to help remind us what web content should be (WebAIM, 2013). Is the content perceivable, even to blind users, is it operable even to motor impaired users, is it understandable even to cognitively impaired users, and is it robust enough to allow machine assistive technology to access the content?

Accessibility Options in Word Processing

There are lots of word processing programs out there that you may be using to start files destined for the web. I'll focus on Microsoft Word, Google Docs, and a

little of Adobe InDesign for my quick tour through accessibility options available. Number one, no matter the program you use, design your document using the styles panel, not the WYSIWYG toolbar. If you repeatedly create documents with the same format, then set up a template file that already has your styles defined with your agency or company's approved fonts and colors. Take advantage of any accessibility checker that the program has built-in. Also, check your export to PDF options settings. There will often be a checkbox for "tag for accessibility" (CKEditor, 2020).

Proper Headings

Headings define sections or chunks of content and give your document semantic structure. If you style the heading with bold 16pt font and don't actually define it as an H2 or H3, then screen reader users will miss out on the structure of your document.

In Microsoft (MS) Word, assign the heading level and then style that heading using the Modify Styles pane. In Google Docs, use the paragraph styles dropdown that usually says "Normal Text" and you'll see all the headings are hiding under that.

In InDesign, edit the paragraph style you you've made for headings, then find the option called Export Tagging. Under PDF Tag, select the appropriate heading level. Before exporting to PDF, assign tags to all your paragraph styles.

Alternative Text

The phrase "alternative text" is usually shortened to "alt text." It is meant as a description of the image that screen readers announce in place of the image. All word processing applications and slide show presentation software should have a field available for alt text. Writing alt text can be challenging because there are character limits. If an image is text-heavy, it is good practice to re-describe it in the body copy and keep the alt text brief. WebAIM is an authority on best practices in writing alt text (WebAIM, "Alternative," 2020).

MS Word and Google Docs both offer users two fields in the alt text pane: Title, and Description. It is easy to make a mistake here and place the alt text in the wrong field. When saving as a PDF, in the author's personal tests, only the description field is turned into alt text after conversion to PDF.

In MS Word, the keyword to look for when searching for the alt text field is "format picture," and then alt text is one of the tabs under the format picture pane. In Google Docs, a contextual click on the image shows "alt text." Using InDesign, look for the keyword "object export options."

Table Headers

When placing a table into any word processing program, look for the checkboxes that define the header rows. Headers will be announced aloud by screen readers as users move through the cells in the table.

Accessibility Options in Adobe Acrobat: PDF Main Ideas

First, ensure the native file has been set up properly with alt text, real headings, and real lists. Check your "Save as PDF" settings in the native file to ensure it will tag the file. In Acrobat, check that the language of the file is set correctly, and check the reading order in the reading order pane. If your native file conversion did not automatically tag the document for accessibility, you'll have to do that manually.

It is super helpful to know what it means to tag for accessibility. The term *tag* comes from HTML, which is, of course, hypertext *markup* language. Coders put markup around content to give it meaning to browsers and screen readers, also called *tags*. Headings have a hierarchy as denoted by numbers H1, H2, H3. Heading 1 is the most important on the page and heading 2 is a main idea of heading 1. Heading 3 is a main idea of heading 2. And the P tag is the markup tag that is put around paragraphs. So "tagging for accessibility" means we are telling Acrobat which tag to add to which piece of content so that assistive technologies can parse the data in the file correctly.

Content Management System Tips for Better Accessibility

The main ideas for CMSs are quite similar to the main ideas for your native files. Use real headings of H1, H2, H3, etc. Use lists that were created with the bulleted list button in your WYSIWYG. Use brief alt text to the images which convey meaning. Assign header rows to data tables. When creating links, use descriptive link

text, and when posting files such as PDFs or .docx, ensure they are also accessible.

Depending on your CMS and the type of WYSIWYG editor it is using, you may have access to an accessibility checker button. Try it out. It will point out potential problems for you.

Lists

Lists in HTML at first seem easy because there is a button right there to make a bulleted list. However, if you hit return after each list item to space them apart, it will break your semantic list of three items and turn it into, say, three lists of one item each. This can be confusing for screen reader users. There are not a lot of options in a CMS for making a prettier list, so this is where learning a little CSS will come in handy. You can use inline styles to add padding under each list item if you have access to and are comfortable in the code view.

Headings and Descriptive link Text

When screen reader users do an auditory scan of the web page, they will first check for semantic headings. The screen reader program called JAWS, which is an acronym for Job Access With Speech, allows for searches of headings and links with keyboard shortcuts. If there are no headings tagged on the page, users must then start listening to the page from the top down to check if the content aligns with what they were searching for. Screen reader users may also pull up a list of all the links on the page, and JAWS will announce the link text of each link. It often happens that the list sounds like this:

> Here, Click here, Here, Here, Click here, More information.

This list of link text, pulled out of context, does not provide the information necessary for users to decide which link to follow. They must then move to the link in context and hear the sentence preceding it.

Content writers may want to keep this laborious workflow in mind when deciding which words will be linked on a web page. Whatever words are linked become the link text. When the link text is descriptive of the link destination, user experience is improved on many counts, not just for screen reader users.

Tools and Plugins

The first tool you can use to check a web page for accessibility is your own keyboard. Keep in mind that all web processes should be able to be accessed by the keyboard alone. If you cannot tab or arrow through your form fields or navigation without a mouse, there is an accessibility problem.

WebAIM offers a free browser plugin called the WAVE toolbar. Use this for a page-by-page check for accessibility issues (WebAIM, "WAVE," 2020). They also offer a free color contrast checker with an easy pass/fail model for small text and large text (WebAIM, "Contrast," 2020).

There are plenty of paid services out there that offer to do an accessibility audit and/or remediation. The author remains unaffiliated, does not offer this service, and will leave it to the reader to research this.

Resources

Sams, Jessica S. "Accessibility Care Package." How to Work on the Web (18 April 2020). http://www.howtoworkontheweb.com/blog/.

References

Tariq, Imran. "Beyonce's Official Website Got Sued—and Yours Could Be Next." Entrepreneur (3 October 2019). https://www.entrepreneur.com/article/339556.

W3C. "Web Content Accessibility Guidelines (WCAG) 2.1." W3C Recommendation (5 June 2018). https://www.w3.org/TR/WCAG21/.

"Section 508 Standards for Electronic and Information Technology." United States Access Board (21 December 2000). https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards.

"What is Color Blindness?" Colblindor. https://www.color-blindness.com/what-is-color-blindness/.

Dyslexie Font website. https://www.dyslexiefont.com/

WebAIM. "Constructing a POUR Website." WebAIM, Web Accessibility in Mind (28 August 2013). https://webaim.org/articles/pour/.

WebAIM. “Alternative Text.” WebAIM, Web Accessibility in Mind (14 October 2019). https://webaim.org/techniques/alttext/.

CKEditor. “Accessibility Checker.” CKEditor 4. https://ckeditor.com/ckeditor-4/accessibility-checker/.

WebAIM. “WAVE Web Accessibility Evaluation Tool.” WAVE Web Accessibility Evaluation Tool. https://wave.webaim.org/.

WebAIM. “Contrast Checker.” WebAIM, Web Accessibility in Mind. https://webaim.org/resources/contrastchecker/.

Author Contact Information

Jessica S. Sams
Website Content and Communications Specialist
Colorado Department of Personnel & Administration
Denver, CO
Personal email: thepixellator@gmail.com
LinkedIn: https://www.linkedin.com/in/jessicasams/

Author Biography

Jessica provides website content guidance, web standards, and training to content managers who work in the various divisions under Colorado’s Department of Personnel & Administration. She manages 13 micro-sites and the Department's intranet. She created a content manager tutorial site for approximately 40 content managers and provides training on using the content management system. As an accessibility advocate, she spreads awareness about the need to make digital content accessible to all people. She has worked on government websites since 2011 and has been a website professional since 2000.