



ADA Live! EPISODE 12: WEB ACCESSIBILITY

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Presenters: Celestia Ohrazda, the Burton Blatt Institute at Syracuse University
Marsha Schwanke, Southeast ADA Center

Host: Sally Weiss, Southeast ADA Center

VOICE OVER ANNOUNCER: Blog Talk Radio. (Music) Welcome to WADA ADA Live! Talk radio. Brought to you by the Southeast ADA Center, your leader for information, training and guidance on the Americans with Disabilities Act. And here's your host.

SALLY WEISS: Good afternoon, and welcome to WADA ADA Live! On behalf of the Southeast ADA Center, the Burton Blatt Institute at Syracuse University, and the ADA National Network, welcome to the 12th episode of ADA Live! The topic of today's show is website accessibility. ADA Live! listening audience, you can submit your questions about website accessibility at any time on ADALive.org. My name is Sally Weiss, and I am director of knowledge translation for the Southeast ADA Center. Now I would like to introduce today's speakers, Celestia Ohrazda and Marsha Schwanke.

SALLY WEISS: Celestia is an Information Technology Consultant for the Burton Blatt Institute at Syracuse University. She works across multiple projects as a web developer, instructional designer, research assistant, and survey manager. Her experience and research focus on accessibility and usability of web-based technologies and the adoption of innovations in media-rich technologies. She has been instrumental in the creation and assurance of accessible electronic products, and research concentrating on access to and the design of learning technologies for individuals from diverse cultural and ability backgrounds.

Marsha is the Web Developer for the Southeast ADA Center. She has been designing, developing, programming, testing and managing content-rich, database-driven web applications and distance education / online training projects since 2000 with a focus on maximizing usability and accessibility based on "best practices" research and established guidelines.

Welcome, Celestia and Marsha, we're glad to have you join us.

CELESTIA OHRAZDA: Thank you, Sally. Good to be here.

MARSHA SCHWANKE: Thank you, Sally.

SALLY WEISS: The Internet continues to dramatically impact our daily lives and how we work, play, and socialize. Businesses and government agencies routinely provide their information, programs, and services on websites, and some are even completely online. As a result, websites are available anytime and anywhere - seven days a week, 24 hours a day. However, poorly designed websites can create unnecessary barriers for people with disabilities, just as poorly designed buildings prevent some people with disabilities from entering. Our speakers today will be talking about web accessibility and what you can do to assure that your websites are accessible.

Celestia, can you explain to our listening audience what web accessibility is?

CELESTIA OHRAZDA: First of all I want to start out by saying that many of the concepts and characteristics we will be discussing today can also be applied to other web-based applications, documents like Word and PDF files, video, and mobile apps, but given the limited time we have today, our focus today is on website accessibility.

And to understand the basics of website accessibility, you need to know a few terms:

A webpage is an Internet-based document that can contain a wide variety of information and multimedia content. A website is a collection of webpages. A web browser is a program installed on your computer or mobile device that downloads webpages and you use to access webpages on the Internet. A screen reader is a program that speaks written text. It allows a person to listen to the written text on a webpage. Screen readers can only read text; they cannot read pictures or other images, so images need a text description. HTML is short for "hypertext mark-up language," a common programming language used to create webpages.

SALLY WEISS: Okay, thanks Celestia. Now that you've given us some web language, can you talk about web accessibility itself?

CELESTIA OHRAZDA: What we need to keep in mind is that web accessibility is really about universal design— As Tim Berners-Lee, Director of the World Wide Web Consortium (otherwise known as W3C), the organization that develops and maintains the protocols used on the web, explains:

"The power of the web is in its universality. Access by everyone regardless of disability is an essential aspect." In other words making a website usable by all people--in different environments, --using different technologies, --with different abilities.

Wikipedia ALSO has a great definition of web accessibility that we can all understand: "Web accessibility refers to the inclusive practice of removing barriers that prevent access to websites by people with disabilities. When sites are correctly designed, developed and edited, all users have equal access to information and functionality".

Web accessibility addresses the online barriers faced by people with disabilities including but not limited people who are blind, people who have low vision or color blindness, people who have physical disabilities, people who are deaf and hard of hearing, and people who have learning disabilities.

Web accessibility addresses the issues that put people with disabilities at a disadvantage when using the web. Web accessibility focuses on how the website itself is designed and not on what information is posted on the site.

SALLY WEISS: Celestia, are you talking about usability?

CELESTIA OHRAZDA: Good question, Sally. No, I am not talking about usability. Accessibility is often confused with usability. However, usability is designing a website to be more efficient, effective, and satisfying for all people – it is about the users' overall experience, how easy it is for someone to use and to find what they want. But a website that has great usability for people without disabilities may have significant barriers for people with certain disabilities, so usability is not the same as web accessibility.

Accessibility is also not about device independence. Device independence means designing a website so it can be used with a variety of devices including phones, tablets, and older browsers.

Improving the accessibility of your site will often improve how your site performs in terms of usability and device independence, but these terms are distinctly different and often confused. A website can pass stringent usability and device independence tests and still not meet accessibility standards.

SALLY WEISS: Celestia, what are the advantages of making a website accessible?

CELESTIA OHRAZDA: From a completely business point of view, by making your website accessible, more people will be able to access your content and services. After all, that's why we have websites --- to spread our message right? We want to

reach users with our products and services and to reach students in our online education..

If that is not reason enough, here are few more reasons – Your website will be easier to manage and make changes. Your search ratings will go up. Your website will be more compatible with different technologies such as smart phones and tablets. Your site may load faster. The usability of your site will improve. And accessibility benefits everyone, plus it is also a legal requirement under Federal laws

SALLY WEISS: And speaking of legal requirements, this question was submitted by one of our ADA Live! listeners: Does the Americans with Disabilities Act apply to websites? Marsha, can you answer this for us?

MARSHA SCHWANKE: I would be glad to, Sally. The ADA and Section 508 of the Rehabilitation Act both apply to web accessibility. According to the Department of Justice, state and local government agencies are required to have accessible websites under Title II of the Americans with Disabilities Act. However, it's worth noting that courts have also found that Title III or commercial entities may also have web accessibility responsibility. For example, in response to a class action suit filed in 2006 by the National Federation of the Blind versus Target, the court ruled that commercial websites such as Target.com are required to be accessible under the ADA and state law.

Federal agencies also have accessibility requirements. Section 508 of the Rehabilitation Act requires government agencies to ensure that their electronic and information technology, which includes websites, are accessible, whether it's used by federal employees or the general public. Some state and local governments, as well as some businesses have also adopted the Section 508 guidelines as their accessibility requirements. In addition, to help you understand and implement web accessibility requirements it is also important to be familiar with the Web Content Accessibility Guidelines developed by the Web Accessibility Initiative from the Worldwide Web Consortium, known as the W3C. The guidelines from the W3C are not a legal requirement, but they are widely regarded as the international standard for web accessibility. We'll give you a link to these guidelines and other legal requirements we discussed on the resource list posted after this episode on ADAlive.org.

SALLY WEISS: I know it's hard to do on a radio show, but can you describe what an accessible website looks like?

MARSHA SCHWANKE: Actually, Sally, an accessible website does not have a specific look. It's important to be aware that supporting accessibility does not impact your ability to innovate and create beautiful web applications. Rather, incorporating

accessibility in your website allows you to add a thin layer of functionality that does not alter your website's appearance. Web accessibility takes place behind the scenes of what people see when they go to your site. But it does make a huge difference in what people with various types of disabilities experience when they explore, navigate, and use your website. Web accessibility will help you communicate more effectively to more visitors and provide a better experience for all your visitors.

SALLY WEISS: ADA Live! listening audience, if you have a question about website accessibility, you can submit it at any time on ADA Live!.org. And now a word from our sponsors.

VOICE-OVER ANNOUNCER: The ADA National Network provides information, guidance, and training on the Americans with Disabilities Act tailored to meet the needs of business, government, and individuals at local, regional, and national levels. The ADA National Network consists of ten regional ADA centers in the United States providing local assistance to ensure that the ADA is implemented wherever possible. The ADA National Network is not an enforcement agency, but a helpful resource supporting the ADA's mission to make it possible for everyone with a disability to live a life of freedom and equality. For answers to your ADA questions, contact the ADA National Network at 1-800-949-4232 (voice/tty).

SALLY WEISS: Welcome back to the second part of our program. Our topic today is website accessibility. Celestia and Marsha, we have some questions for you.

What are some common problems and solutions in website accessibility? Marsha, let's start with you.

MARSHA SCHWANKE: Well, Sally, designing accessible websites is not as difficult as you may think. The goal is to make sure that people with disabilities have equal access to information and technology. Yes, there are many guidelines and protocols, but this type of guidance helps make your job easier. Website accessibility starts in the design. But, retrofitting a website to make it accessible can be very expensive, time consuming, and tedious. We can start by talking about some typical website features and making sure they don't provide barriers for people with disabilities. Let's start with images.

Images and other graphics that don't have text descriptions are a barrier for people with visual or cognitive disabilities, who use screen readers or text-to-speech technologies. These programs can only read words, not images. To make images accessible, the image must have a text description, which is known as "alternative text" or "alt text." When a screen reader comes across an image, it says "image," and then it says what's in the alt text. However, when the alt text is missing, the screen

reader says "image" and then whatever the name of the image file is, and the person will have no idea what the image means. You must provide alt text for images and other graphics. The alt text should explain the purpose or function of the image and describe the content of the image within its context. For example, if the image is a photograph of a man with a service animal in a news article, the alt text would describe the image within its context. In this example, the alt text could be "man with a service dog." Another example would be if you have an image that is an icon, like the image of a thumb pointing up in social media, the alt text would explain the purpose or function of the image. In this example, the alt text could be "Likes" or "Thumbs up." The alt text should not contain the words, "image of." It should also be succinct, just a few words. It's also important to know that missing, incorrect, or poor alt text is one of the most common barriers to web access.

SALLY WEISS: Thanks, Marsha. I think I can picture this perfectly. What's the next thing to check?

MARSHA SCHWANKE: Well, Sally, links on web pages or websites can be problems. Make sure that links make sense on their own. A link should let you know what to expect after the link is selected. People who use screen readers or people who only use keyboards will often access a list of links to explore a web page. If your web page has several "click here" links, what someone using a screen reader will hear is "click here, click here" and they have no idea where the "click here" links will take them. Instead of ambiguous links, a link should describe where it's taking you. For example, a link could be "more publications" or "continue to topic four." Try reading the link by itself. Can you make sense of where the link will take you or what information you will find after selecting the link? If not, make a change.

Also, to be accessible, links should be clearly identified as links. They should not just look like more words in a sentence. Ensure that people can visually identify links when navigating a web page with a keyboard. Links should also be differentiated from text, such as being underlined and in a color that contrasts with the main text.

SALLY WEISS: Marsha, does color apply to anything else?

MARSHA SCHWANKE: Yes, it certainly does, Sally. You should also check the color contrast between the text and the background. Many people with low vision and color blindness view web pages differently. Some only see small portions of the web page at a time. Others cannot see small text or images. Others can only see web content if it appears in specific colors. For these reasons, many people with low vision and color blindness use specific color and font settings when they access the internet.

For a website to be accessible, it must be designed to be able to adjust and override the webpage display, including the text and background colors, as well as the font sizes. Actually, it's important that everyone visiting your website can read the text or content easily. So the font size should not be any smaller than 10 points.

Also, websites should not rely on color alone to convey information. While color can help improve understanding, color cannot be seen by a screen reader or by some people with color blindness or low vision. For example, required information for online forms is often displayed in a certain color, such as red. And red-green color blindness is most common. So in order to be accessible, required information should also be set off by another notation, such as an asterisk.

SALLY WEISS: Thank you, Marsha. What about videos?

MARSHA SCHWANKE: Videos and other multimedia that are uncaptioned are not accessible to people who are deaf or hard of hearing. People who are blind or have low vision also face barriers with videos. Captioning should always be provided for people who are deaf or hard of hearing. And, actually, captioning has more global benefits. It helps people who do not have English as their primary language. It helps people using their web mobile device in a noisy environment. It helps people who have learning disabilities, and people who are not auditory learners.

In addition, because captioning is text-based, it can be picked up by search engines. Providing audio descriptions can help people who are blind get the most benefit from videos. People who are blind can hear what is being said, but providing audio descriptions such as changes in the setting, gestures and other details, can make it easier for them to follow what is happening.

SALLY WEISS: What else do I need to know when I'm trying to put together a website?

MARSHA SCHWANKE: One important thing is to make sure each page has its own page title and that there are headings throughout the page. Headings help people using screen readers to navigate the page, but they also help everyone navigate the page by providing an outline so they can figure out where they are and what comes next.

Another thing to remember, make sure everything that you provide on your website is formatted to be accessible, including documents, such as Word and PDF files, and PowerPoint presentations, and online forms. Many of the concepts and

characteristics for web accessibility also apply to making accessible documents and accessible forms such as color contrast, heading structure, and images with text descriptions.

SALLY WEISS: Do you have any other tips you want to share?

MARSHA SCHWANKE: Yes, just a few more, Sally. Some other things to keep in mind when making a website accessible include provide a skip navigation link at the top of web pages. This allows people who use screen readers to go directly to web page content.

Also, avoid using all caps, which can be difficult to read and can also be read incorrectly by screen readers. You should avoid blinking, flashing or rapid transitions, which can cause seizures in people with photo epilepsy.

Finally, when you design online forms be sure there are descriptive labels and provide clear instructions. It's also helpful to provide a phone number so people with disabilities can get assistance if needed in completing and submitting the form.

In summary, a responsive, well-designed website accommodates differences in technology, web browsers, and individuals, and works across a wide range of devices.

Links to learn more about the concepts, techniques and best practices of web accessibility will be provided in a resource list for this episode on ADALive.org.

SALLY WEISS: Thank you. We will pause now for a word from our sponsors and be right back.

VOICE OVER ANNOUNCER: The ADA Center is your leader in providing information, training and guidance on the Americans with Disabilities Act and disability access tailored to the needs of business, government and individuals at local, state and regional levels. The Southeast ADA Center, located in Atlanta, Georgia, is a member of the ADA National Network and serves eight states in the Southeast region. For answers to your ADA questions, contact the Southeast ADA Center at 1-800-949-4232.

SALLY WEISS: Welcome back. We're talking about website accessibility with Celestia Ohrazda of the Burton Blatt Institute at Syracuse University and Marsha Schwanke of the Southeast ADA Center.

Our next question is for you, Celestia. What can I do to get started on checking to see if my website is accessible?

CELESTIA OHRAZDA: That's a great question, Sally. Frequently, people will ask me "can you check to see if this website accessible- here's the link". Well, if I can access the site it accessible ---- to me. But this doesn't mean that it is accessible to everyone. What we really are talking about is the level of accessibility. For example a webpage that is predominantly a video with embedded links designed to be viewed on a large touch screen monitor is accessible to the user that can see, hear, has the video technology enabled in the browser and has the technology to navigate the site. However, for many users the website is not accessible and all they see is a large grey box stating the browser does not support this file.

As Marsha emphasized, designing a well-organized website and following the guidelines is the first step in making a website accessible. People need content that's easy to read, works on different devices, is easy to navigate, has good design, clear structure and color contrast, images and graphs are well-described, the videos are captioned or there's transcripts, and the documents and downloads can be accessed by everyone, everywhere.

A thorough check of the accessibility of your website requires web development technical expertise, however there are a few tests that people without technical expertise can do to test for accessibility features for websites. There are two ways to check for the accessibility of your website, and you should do both. You can check it manually and you can also use automated evaluation tools. Let's talk about checking your website manually first. There are many relatively simple manual tests you can do to check the accessibility of your website.

Let's start with the simplest. Unplug your mouse, and try navigating by keyboard only. Many people navigate a website using only their keyboard or other pointing devices. Check to make sure your links are clearly identified.

As Marsha mentioned, links such as "click here," have no meaning when taken out of context, and neither does a link that is just a web address. Frequently screen readers will navigate a site using links, and what they will hear "click here, click here," and have no idea where "click here" will take them. They have no idea what they are clicking on.

Another test you can do is check your language level. Is there a plain language summary for complex contents?

Turn off the graphics and sound on your website. Can you still access and make sense of the content? Are there text descriptions for your images? Are your videos captioned or have you provided transcripts for your videos? Another test you can do is resize the fonts on your browser. Do the fonts and graphics resize?

View your website in other browsers and on an older computer. Test your site in different browsers such as Safari, Chrome, Internet Explorer, and test your website on a PC and a Mac. Does your website still display properly? Just because your website works and displays beautifully in the latest version of Firefox, does not mean it will work with other browsers or with older browsers and operating systems.

SALLY WEISS: Thanks so much. Will there be a list of these manual test steps on the resource list?

CELESTIA OHRAZDA: We have provided instructions for some of these manual tests such as resizing the text on your browser, turning off the graphics and the sound, on the resource sheet that we'll post to ADAlive.org after this broadcast. We'll also give you links to websites where you can check the readability levels of the content that you put on your website.

SALLY WEISS: I think we're ready to learn about the automated evaluation tools now.

CELESTIA OHRAZDA: Okay. It is also necessary to verify the accessibility of your website using automated evaluation tools. Web accessibility evaluation tools are software programs or online services that help determine if a Web site is accessible and can also be used to check the accessibility of your website for compliance to established guidelines such as Section 508 and the W3C Web Content Accessibility Guidelines..

Web developers usually have a few favorite tools. WAVE - Web Accessibility Evaluation Tool by WebAIM is one of the more well-known tools. This is a free tool that is available online and also as a web browser plugin. What I like about this tool is that rather than providing a complex technical report, WAVE shows the original web page with a visual overlay that is color coded so you can recognize the errors. WAVE also includes options to view the page "without styles." This option displays the structure of your page and shows the text only version – a great way to check the structure of your page and also your page without images.

There are many other automated tools to automatically check accessibility. These include 1) readability tests that analyze a Web page to determine the reading level, 2) Color Contrast Analyzers that test whether the contrast between the background and the foreground is sufficient, 3) image analyzer tests that ensure that images have been specified properly, 4) screen reader simulators.

The W3C has a comprehensive list of web evaluation tools that are provided on the Resource List for this episode. The resource section also includes links to some of our favorite tools.

SALLY WEISS: Thank you Celestia. We're running out of time. But Marsha, can you tell us briefly where I can get more information about web accessibility?

MARSHA SCHWANKE: Why, yes, Sally. There is an overwhelming amount of information resources about web accessibility, both online and in print including tutorials, fact sheets and checklists. Where to begin? Some of our suggested website resources include the W3C, WebAIM, and Section508.gov. Links to these resources will be available on the resource list for this ADA Live! episode on ADA Live.org. There are also numerous opportunities both online and in person for training and discussing web accessibility, including webinars, courses and social media events.

Some upcoming free webinars on web accessibility include the next webinar in the ADA National Network ADA Legal Webinar Series called "Websites and the ADA: Accessibility in the Digital Age," on Monday, September 22nd. The ADA National Network also has an Accessible Technology Webinar Series with two upcoming webinars: "Android Is Really Accessible" on Thursday, September 25th, and "Accessibility Anywhere, Almost: Captioning for Web-Based Applications" on Thursday, November 20th. In addition, the Southeast ADA Center and the Burton Blatt Institute at Syracuse University are sponsoring a free webinar, "eQuality: The Struggle for Web Accessibility by Persons with Cognitive Disabilities," on Thursday, October 16th.

In summary, making a website accessible from the start provides more flexibility, avenues for growth as technology changes so rapidly. But always keep in mind that accessibility is an ongoing task. Even if a website passes all website accessibility checks, technology and websites are always changing. So continue to test, even after all the tests have been done.

SALLY WEISS: At this time, I would like to thank our guest speakers, Celestia Ohrazda of the Burton Blatt Institute at Syracuse University, and Marsha Schwanke of the Southeast ADA Center. And thank you, also to our ADA Live listening audience. The Southeast ADA Center is grateful for your support and participation in this series of WADA Live broadcasts. Join us next month on the first Wednesday, October 1st when we will be talking about the LEAD Center, a national center on leadership on employment advancement for people with disabilities in honor of National Disability Employment Awareness Month. See you next month on ADA Live!

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