



Quick and Practical Web Accessibility Testing for First Impressions

Todd Schwanke

McBurney Disability Resource Center

UW-Madison IT Professionals Conference 2018

May 31, 2018

Assumptions

- Web accessibility for web pages and applications
- Usable, not just meeting the standard
- Some knowledge of HTML coding and accessibility
- Focus on the technique
- Won't get into specifics of WCAG 2.0, policy, etc.
- Web Accessibility is more than screen readers

Quick, Quick, Quick

- Quick technique
- Quick presentation
- Quick (but limited) results

What it is not

- Not an answer to the question: “Is it accessible?”
- Not full accessibility test
- Not end user testing

What it is

- Helps answer the question: “Does the developer appear to be paying attention to accessibility?”
- First Impression of accessibility
- Blend of standards testing and practical testing
- Provides general sense of how usable/practical page is
- Stepping stone

Context

- This presentation is primarily from the perspective of testing websites and applications that already have been created.
- But, the techniques can also be used during the design process.
- Designing from the start with accessibility built in is best.

Flipping the Model

- Familiar tools
- Looking for what is there and what was done ... rather than errors and what is not there
 - (what has the developer put in rather than what they have missed)

Technique Demo – UPS Hold Mail

USPS Hold Mail Service

[Request Hold Mail Service](#) / [Edit/Cancel Your Hold Mail Request](#) / [FAQs](#)

Headed out of town? We can hold your mail safely at your local Post Office™ until you return. Sign up for USPS Hold Mail Service in two simple steps.

Schedule Hold Mail Service. You can notify us up to 30 days in advance or as early as the next scheduled delivery day. Request your start date by 3 AM ET (2 AM CT or 12 AM PT) on your requested day, Monday – Saturday. (NOTE: For hold times greater than 30 days, please sign up for a [USPS Forward Mail Service](#) >)

Step 1: Check if Hold Mail is available for your address.

Fill in your information and check availability to see if your ZIP Code™ is eligible for Hold Mail.

Note that we will hold all mail for this address, rather than an individual's. An address can have only one Hold Mail Service scheduled at a time.

*Indicates a required field

This is a business address.

What is your address?

*First Name	M.I.	*Last Name
<input type="text"/>	<input type="text"/>	<input type="text"/>
*Street Address	Apt/Suite/Other	
<input type="text"/>	<input type="text"/>	
*City	*State	*ZIP Code™
<input type="text"/>	Select <input type="text"/>	<input type="text"/>

Step 1: Examine Document Structure

Question

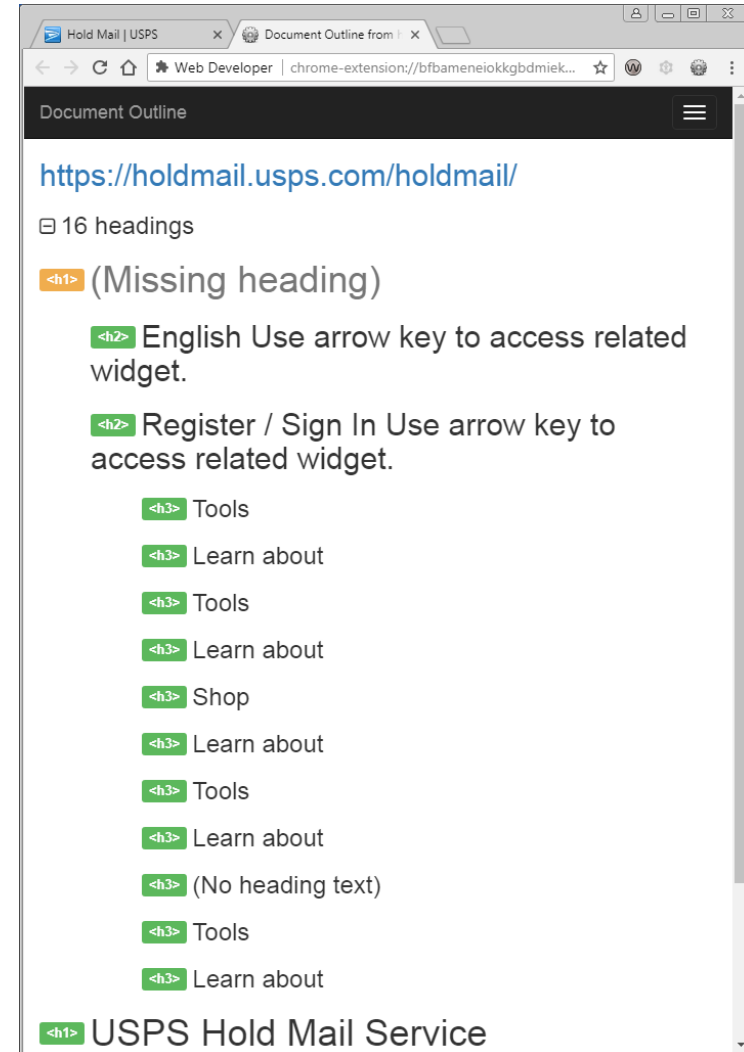
- Were headings used properly?

Tools:

- WAVE Chrome plug-in
- Web Developer toolbar (Chrome and Firefox) or equivalent
 - “View Document Outline” (under *Information*)

Test:

- Display and examine the heading structure of the page



Step 2: Check the ALT text

Question

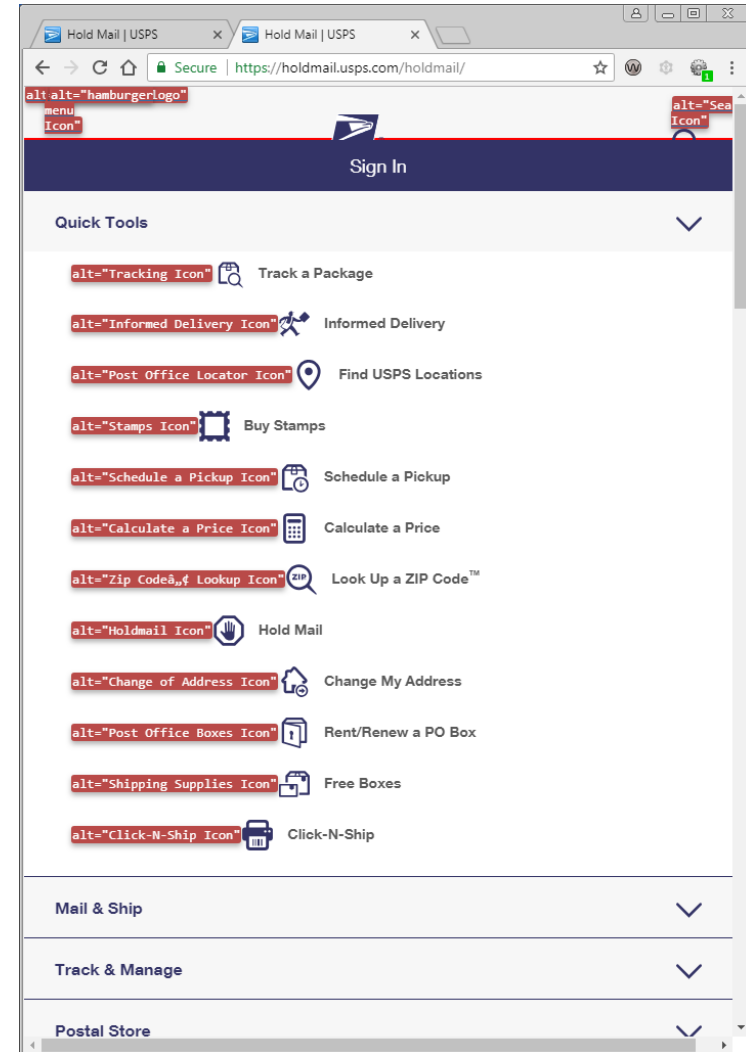
- Was ALT text used, and is it meaningful/functional? If the user can't see the images or other objects, does the ALT text give them the essential info and make it possible to navigate?

Tools

- WAVE Chrome plug-in
- Web Developer toolbar or equivalent
 - “Display ALT Attributes” (under *Images*)

Test

- Display the ALT attributes and determine if they replicate the purpose of the images and other objects
- (Optional – Turn off images)



Step 3: Navigate with the keyboard only

Question

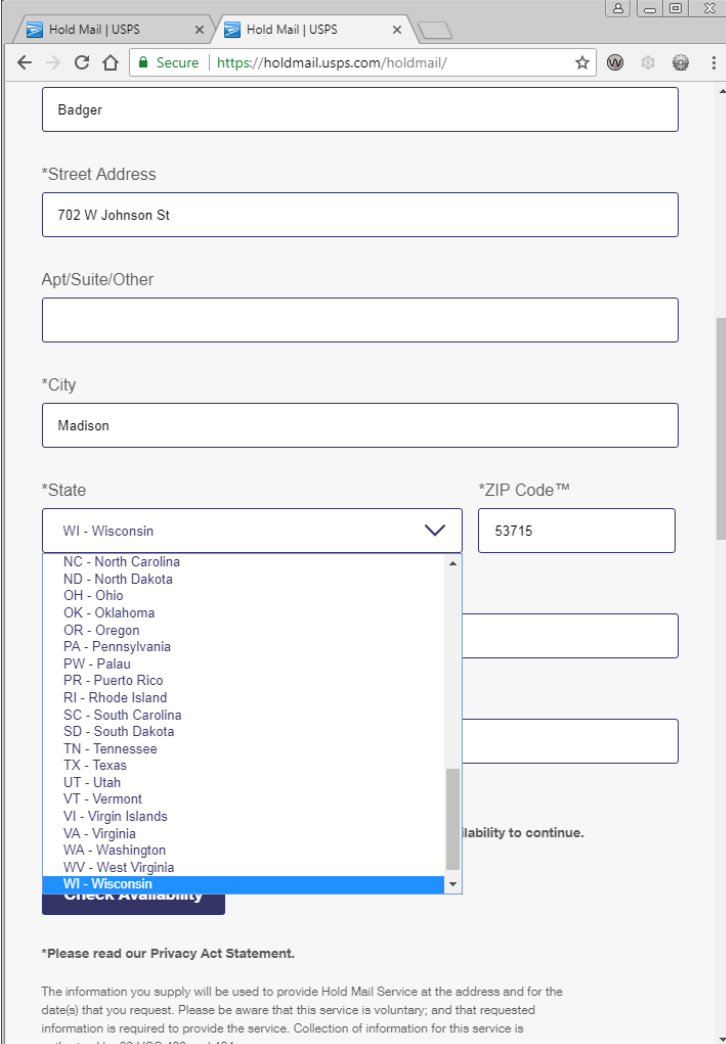
- If you are only using the keyboard, can you navigate, get to everything (without tricks or resorting to the mouse), and complete the intended tasks in the intended order?

Tools

- Tab Key & Shift + Tab
- Enter
- Spacebar
- Up or Down, Right or Left Arrows
- Alt + Down or Up Arrow

Test

- Navigate the site and complete the tasks with the keyboard only.



The screenshot shows a web browser window with two tabs titled "Hold Mail | USPS". The address bar shows "https://holdmail.usps.com/holdmail/". The form contains the following fields:

- Badger
- *Street Address: 702 W Johnson St
- Apt/Suite/Other
- *City: Madison
- *State: A dropdown menu is open, showing a list of states from NC to WV. "WI - Wisconsin" is highlighted in blue.
- *ZIP Code™: 53715

At the bottom of the form, there is a "CHECK AVAILABILITY" button and a link to the Privacy Act Statement. A small text note at the bottom right of the form reads "liability to continue."

Step 4: Check form labels

Question

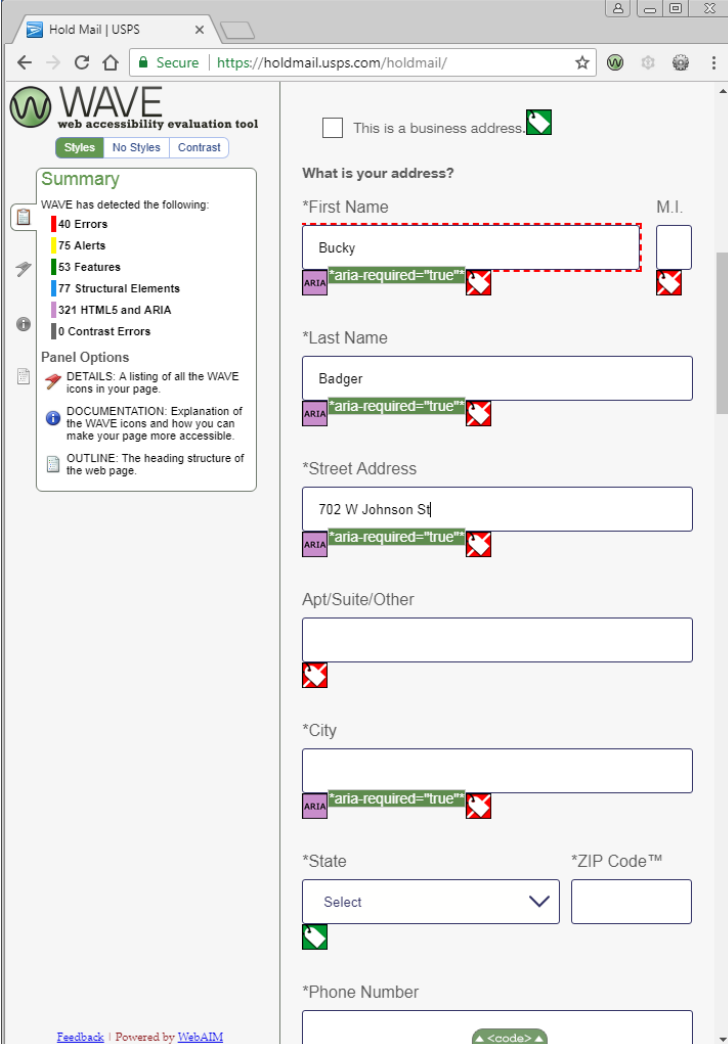
- Are form fields assigned functional labels?

Tools

- WAVE Chrome plug-in
- (Web Developer toolbar can outline missing labels)
 - “Outline Form Fields Without Labels” (under *Forms*)

Test

- Use WAVE to display the form labels



The screenshot displays the WAVE (Web Accessibility Evaluation Tool) interface overlaid on a USPS holdmail form. The tool's summary panel on the left indicates 40 errors, 75 alerts, 53 features, 77 structural elements, 321 HTML5 and ARIA issues, and 0 contrast errors. The main form area shows several input fields with red dashed boxes and 'ARIA' icons indicating missing or incorrect labels. The fields affected are: *First Name (containing 'Bucky'), *Last Name (containing 'Badger'), *Street Address (containing '702 W Johnson St'), *City, and *State (a dropdown menu). The *ZIP Code™ and *Phone Number fields do not have such indicators. The browser's address bar shows the URL 'https://holdmail.usps.com/holdmail/'.

Other overarching checks

- Descriptive and unique link text
- Color contrast (visually and with mouse)
- Selecting blocks of text to check reading order and what is text vs. image
- Changing browser window and zoom sizes to see if site holds together
- Quality captions on videos (e.g. default YouTube auto-generated captions are not sufficient)

“USPS Hold Mail” demo summary

Accessibility has been considered, but there are some significant areas of concern

Good

- ALT text (but some issues)
- Form field order
- Focus on the error message after submitting the address modal
- Field specific notifications empty required fields (after submitting)

Concerning

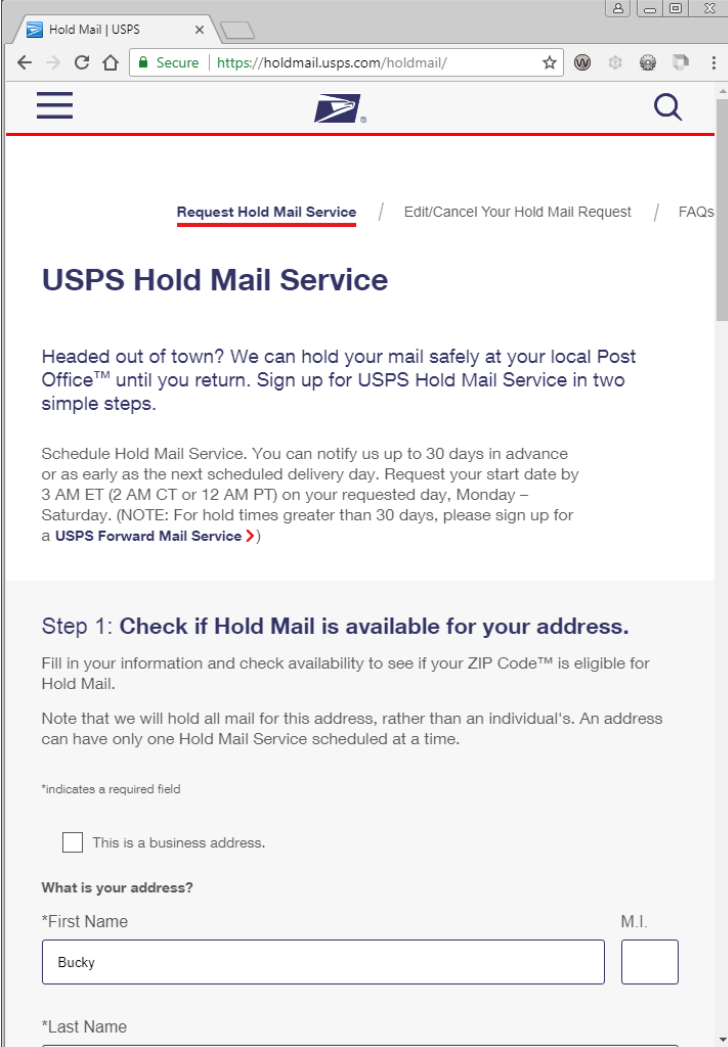
- Heading structure and reuse of heading text
- Locating keyboard focus
- Keyboard navigation when address modal pops up
- Missing form field labels

NVDA Screen Reader Demo

NVDA is a free screen reader for Windows that works best with Firefox.

It is more literal in how it reads pages.

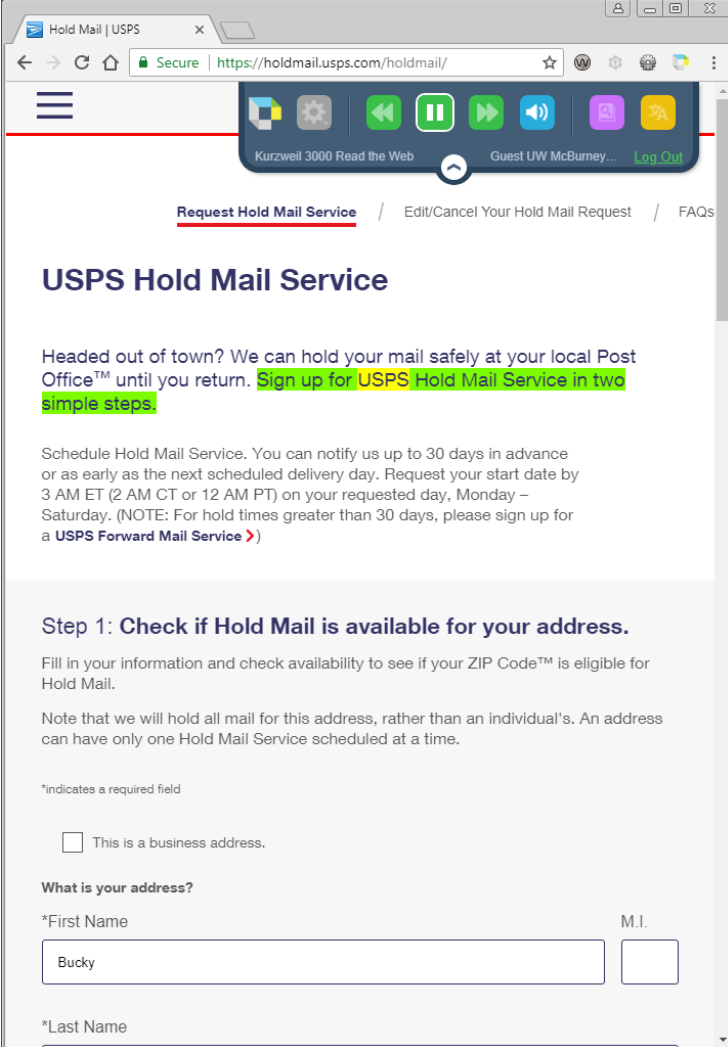
Change the synthesizer used with NVDA before getting started.



The screenshot shows a web browser window displaying the USPS Hold Mail Service page. The browser's address bar shows the URL <https://holdmail.usps.com/holdmail/>. The page content includes a navigation menu with links for "Request Hold Mail Service", "Edit/Cancel Your Hold Mail Request", and "FAQs". The main heading is "USPS Hold Mail Service". Below this, there is a paragraph explaining the service: "Headed out of town? We can hold your mail safely at your local Post Office™ until you return. Sign up for USPS Hold Mail Service in two simple steps." A second paragraph provides details on scheduling: "Schedule Hold Mail Service. You can notify us up to 30 days in advance or as early as the next scheduled delivery day. Request your start date by 3 AM ET (2 AM CT or 12 AM PT) on your requested day, Monday – Saturday. (NOTE: For hold times greater than 30 days, please sign up for a [USPS Forward Mail Service](#) >)" The page is divided into sections, with the first section titled "Step 1: Check if Hold Mail is available for your address." This section contains instructions to fill in information and check availability. A note states: "Note that we will hold all mail for this address, rather than an individual's. An address can have only one Hold Mail Service scheduled at a time." Below this, there is a checkbox labeled "This is a business address." and a section titled "What is your address?" which includes input fields for "First Name" (containing "Bucky"), "M.I.", and "Last Name".

Kurzweil 3000 Read the Web Demo

Example of a Chrome extension that reads with highlighting for users with print-related disabilities with vision.



The screenshot shows a Chrome browser window displaying the USPS Hold Mail Service page. The address bar shows the URL <https://holdmail.usps.com/holdmail/>. A Chrome extension, "Kurzweil 3000 Read the Web", is active and overlaid on the page. The extension's interface includes a play button, a pause button, and a volume icon. The page content is as follows:

Request Hold Mail Service / [Edit/Cancel Your Hold Mail Request](#) / [FAQs](#)

USPS Hold Mail Service

Headed out of town? We can hold your mail safely at your local Post Office™ until you return. **Sign up for USPS Hold Mail Service in two simple steps.**

Schedule Hold Mail Service. You can notify us up to 30 days in advance or as early as the next scheduled delivery day. Request your start date by 3 AM ET (2 AM CT or 12 AM PT) on your requested day, Monday – Saturday. (NOTE: For hold times greater than 30 days, please sign up for a [USPS Forward Mail Service](#) >)

Step 1: Check if Hold Mail is available for your address.

Fill in your information and check availability to see if your ZIP Code™ is eligible for Hold Mail.

Note that we will hold all mail for this address, rather than an individual's. An address can have only one Hold Mail Service scheduled at a time.

*indicates a required field

This is a business address.

What is your address?

*First Name M.I.

*Last Name

Web Developer Toolbar

- Be curious!
- The Web Developer Toolbar and other similar tools have a lot of other helpful features to explore web accessibility and structure.
 - E.g. Disable All Styles (CSS), Display Aria Roles (*Information*), Display Tab Index (*Information*), Linearize Page (*Miscellaneous*), Outline Frames (*Outline*)
 - Unfortunately the Web Developer Toolbar does not have a focus indicator enhancement feature, which is helpful for more quickly exploring keyboard accessibility.

Resources

- [Web Developer Toolbar for Chrome and Firefox](https://chrispederick.com/work/web-developer/)
(https://chrispederick.com/work/web-developer/)
- [WAVE](https://wave.webaim.org/) (https://wave.webaim.org/)
- [NVDA](https://www.nvaccess.org/download/) (https://www.nvaccess.org/download/)
- [Using NVDA to Evaluate Web Accessibility \(Windows\)](https://webaim.org/articles/nvda/)
(https://webaim.org/articles/nvda/)
- [Using Voiceover to Evaluate Web Accessibility \(Mac\)](https://webaim.org/articles/voiceover/)
(https://webaim.org/articles/voiceover/)

Questions?

- What did you connect with?
- What didn't make sense?
- What would you like to learn more about?
- What resources would you like from the presentation? In what form?
- Other?

Leave you with...

Each web page and application that we design is a new interface for a user to learn, even if based on a common template.

Todd Schwanke

McBurney Disability Resource Center

608-263-2741

todd.schwanke@wisc.edu

Session Description

Web sites and applications need to be accessible and usable. Getting quick, practical feedback early and often in the development or acquisition cycle can make the end result much better, and the process much easier for all involved. This session will demonstrate a process of quick and practical testing using the keyboard, visualization tools, a bit of accessibility knowledge, and free screen readers to quickly, but generally, assess how well a site was designed and what might be the experience for users who have disabilities or use assistive technology. This process does not take the place of more thorough testing, end user testing, or compliance checking, yet can provide the IT professional and their team with valuable preliminary info.