WEB ACCESSIBILITY AND TESTING

WRITTEN BY NANCY REYES, *HEARCOLORS*

FIRST… PLEASE!

It is very important that you consider accessibility from the early stages of development and design of whatever tool you are creating and continue testing throughout the life of the project. This only takes minimal extra work, especially if you already know the basics of web accessibility.

Considering accessibility at the beginning of your project will help you avoid having to go back and fix things you already spent significant time on. But what if you forgot to think about accessibility from the beginning?? A person with a disability may not be able to use your product at all, even if you spent months working on usability issues. If you ask a blind person to try your product and he or she cannot succeed, this begs the question, is your product truly usable. This includes people who have visual, motor, hearing or cognitive disabilities, **approximately 1 billion people in the world**, or around 15%, of the entire world's population -- http://www.worldbank.org/en/topic/disability/overview.

AFTER CONSIDERING ACCESSIBILITY, YOU NEED TO DO SOME TESTING TO ENSURE IT

There are some automated tools to validate web accessibility. However not all guidelines can be evaluated automatically, so you need to evaluate manually through testing as well.

Evaluation of web accessibility should start as soon as possible, or at least the moment you have a test environment of the website. Do not wait until the end because it will take more time and effort to correct things that could have been corrected from the beginning (especially if you are using the same logic in multiple elements, making the same mistake again and again).

Validation can be done manually and with the help of automated tools to find errors faster. For example, an automated tool can filter all alternative texts of the images, but only a human can determine whether these texts are equivalent to the images. Some recommendations are:

Tools online to validate websites
- Web Accessibility Evaluation Tool (WAVE)
- Web Accessibility Checker
- TAW Validator WCAG 2.0 beta

Tools to validate color contrast
- WebAIM Contrast Checker
- SSB BART Group Contrast Checker
- WCAG Contrast Checker (Firefox)

Toolbars
- Web Accessibility Toolbar (Internet Explorer)
- Jim Thatchers Favelets (Internet Explorer or Chrome)
- Accessibility Evaluation Toolbar (Firefox)
- Juicy Studio Accessibility Toolbar (Firefox)

Other tools
- [aXe Developer Tools (Firefox)](#)
- [aXe Developer Tools (Chrome)](#)
- [W3C Markup Validation Service](#)

NOW FOR THE MANUAL TESTING

Once you check the compliance of specific standards, you need to do some testing with just the keyboard and a screen reader. Cover your eyes and try it!

First, navigate the home page: header, menu, footer and left or right section. Then navigate the entire website, search for widgets, accordions, tab panels, carousel, canvas, svg, forms, etc. and verify the correct navigation and functionality. You can use: Tab, Shift + Tab (to return), arrows, enter, spacebar etc.

Does the screen reader announce everything so you can understand without watching the screen?

Some people with disabilities use just the keyboard to navigate, but some assistive technologies also simulate the effect of the mouse, so make both options available.

I recommend testing with at least with two screen readers:
- [JAWS screen reader (Windows)](#)
- [NVDA screen reader (Windows)](#)
- If you have a Macbook, VoiceOver screen reader is already installed.

You can use the following combinations:
- JAWS with Internet Explorer
- NVDA with Firefox
- VoiceOver with Safari

It would also be great if you have people with disabilities as part of your team, so you can be sensitive about the challenges and get constant feedback.

When you test the site, validate at least the following:
- The elements that should receive focus (links, inputs or buttons), receive focus when you navigate with the keyboard
- The location of the focus is displayed
- The screen reader announces labels and text alternatives
- You can navigate correctly components such as menu and submenu, accordion, tab panel, carousel, etc. You must also verify that the roles and states are announced by the screen reader
- Color contrasts

Once you find an accessibility problem, try to fix it (with the resources mentioned above), then test again.

<u>Important!</u>: accessibility must be maintained over time, especially on sites that are constantly updated.

Accessibility must always be present in the design and development of technologies and your extra work will have a positive impact on the lives of others. The small decisions you make every day can truly change the lives of millions.