ACCESSIBILITY TOPICS
COVERED IN THIS E-BOOK:

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We get a lot of questions about web accessibility here at Siteimprove, and we would like to take this opportunity to answer some of them. This is probably more of a review for seasoned accessibility folks, but there’s a growing demand for this kind of introductory information as more web professionals recognize the importance of accessibility.

What is web accessibility and why is it important to the success of my website?

Web accessibility refers to the inclusive practice of making websites usable by people of all abilities and disabilities. When sites are correctly designed, developed, and edited, all users can have equal access to information and functionality.

What are the benefits of website accessible coding standards?

There are quite a few benefits to coding accessibility into your website that go beyond just meeting the minimum accessibility laws:

Social Responsibility

It’s time to act socially responsible. Accessibility is about allowing people with and without disabilities to have access to the information they want and need. As our population changes, we need to educate the people responsible for generating communication channels to be aware of ALL of our different users.

A Larger Customer Base

With reports of one in five web users claiming some sort of disability, 20% of the population is just too large of a group to ignore. If you go the extra steps to accommodate this group, you will be certain of a loyal group of customers.

Efficient Code

Once you’ve developed a clean, accessible code base, you will be amazed at the benefits. Efficient code can help improve:

• Website maintenance
• Device compatibility
• Faster page loading
• Search engine optimization (SEO)

What are the “nuts and bolts” of web accessibility?

We receive many accessibility questions that are more technical in nature, because the standards can get pretty complex. Some of the most important coding practices are quite simple to control in your different coding environments, for example:

• Semantic Markup
• Page Titles
• Headings
• Graphics
• Links
• Tables and Forms

Addressing these areas adds an immense amount of usability to your overall site, and provides a solid framework to build on.
What is assistive technology?

When talking about assistive devices to aid visitors with disabilities, the first and sometimes only device that comes to most people’s mind is a screen reader (if you haven’t heard of a screen reader, it’s a tool that reads pages aloud to people with low vision or severe dyslexia). While screen readers are an extremely important assistive device, it’s by no means the only device. Other assistive technologies are used to support a wide range of disabilities. These technologies include:

- Screen readers
- Windows and Mac Accessibility features
- Color contrast analyzers
- Toolbars/extensions/plug-ins
- Mobile devices

When optimizing your website to accommodate users with disabilities, it’s important to understand what kind of issues they may encounter depending on the type of assistive technology they may be using.

4 COMMON ACCESSIBILITY MYTHS THAT NEED TO DIE

We’ll cover several common misunderstandings in connection with accessibility problems on websites. Find out whether your website is doing it right or wrong.

“All images need an alt text.”

It is not necessarily correct to add text to an image. If the image doesn’t provide any information, it will only create noise for the user. A common misunderstanding is that all images need an alternative text. This is not the case, but all images need an alt-tag (the code alt=””). Whether the image should have an alternative text depends on the context and purpose of the image. Ask yourself these questions:

- “Do I use the image as a decoration to create a visual context?” If this is the case, the image should not have an alternative text.
- “Do I use the image to provide information?” Then you need to describe what a visually impaired user can’t see on the image (and this is not necessarily the same as describing what the image shows).
- “Does the image link?” Then you need to describe the destination of the link in the alternative text.

“Our cms automatically puts in headings in fixed places on the pages.”

A website’s main areas need to be categorized by headings. This means that your web editors should always check whether H1 tags, H2 tags, etc. are used correctly, and they should be able to enter these tags if they are missing. If you wish to logically and visually highlight an area by using bold font/large font/another color etc. then this heading should also be highlighted code-wise so the heading not only functions visually, but also structurally.

“The placeholder text in our search field is sufficient for explaining the purpose of the field.”

If you want to make sure that all users can identify and use your search field, and at the same time comply with accessibility guidelines, then you need to explicitly add text to the field through a label (the code label for=””). If this is not possible, use title=”).
“The audio reading tool we link to makes it possible for all disabled visitors to use our website.”

This is not necessarily true. An audio reading tool might help some people with dyslexia, but most people with impairments or dyslexia use specialized assistive technologies. They need significantly more help than what a simple audio reading tool can provide. The web standards and guidelines for accessibility are created in order for user agents (browsers, assistive technologies etc.) to be able to interpret a website and render it in a meaningful way to the user. That is why the most important element when working towards ensuring accessibility is to follow the standards and guidelines.

3 EASY WAYS TO IMPROVE YOUR WEBSITE’S ACCESSIBILITY

It can be difficult to know where to start if you have not implemented web accessibility before. Where do you begin and how do you finish? Some areas require time and a targeted effort whilst there are some ways in which you can improve your website accessibility right away, and at the same time conform with three important criteria in the WCAG (Web Content Accessibility Guidelines). Here follow three easy website accessibility fixes:

1. Give your web pages meaningful titles

By providing all your web pages with a meaningful page title, you help both users and search engines. Use a tool that can easily identify pages with missing titles for you. Make sure to provide these pages with a title, and also go through a selection of your existing page titles to assess whether they are descriptive enough for the content on the page. The first thing a screen reader encounters when a web page is opened is the page title. The title is an important element on a page for screen reader users, because it informs them of the content they can expect to find on the page. By providing your web pages with meaningful titles you are in conformance with WCAG success criterion 2.4.2: Page Titled: “Web pages have titles that describe topic or purpose.”

2. Provide support for users who cannot use a computer mouse

Create a link that is present on all your web pages as the first element on the page. This link should take the user directly to the page content (skipping for instance the global menu). This way users with visual impairments, motor impairments and other types of users using a screen reader, or who navigate from the keyboard alone can skip repeated blocks of information.

You can hide the link visually on the page if you like, as long as it’s still visible when it receives focus. (e.g. highlighted when a user presses the “Tab” button). By helping users who cannot use a computer mouse you are in conformance with WCAG success criterion 2.4.1 Bypass Blocks: “A mechanism is available to bypass blocks of content that are repeated on multiple Web pages.”

3. Review the images on your main pages

Go through your main page and your template pages and assess whether the images should have alternative texts. The code for alternative text (alt”) must always be present for any image, however, if the image is decorative the alt text field can be left empty. If the image conveys information that you would not know without seeing the image, then this information should be written in the alternative text. If the image is a link, then describe the destination to where the link takes you.

When working on alternative texts for images, you are conforming with an essential part of WCAG success criterion 1.1.1 Non-text Content: “All non-text content that is presented to the user has a text alternative that serves the equivalent purpose (with a number of exceptions).”
WHY “CLICK HERE” IS A BAD THING

When you come to a fork in the road, take it.
-Yogi Berra

Just like the quote above, giving poor directions will usually lead visitors down a confusing path. When it comes to directing visitors on your website, one of the most persistent accessibility issues is the dreaded “Click Here” or “Read More” link – known as Link Purpose (In Context). In fact, telling users to “Read More” can often result in less clicks for assistive technology users.

So how does this happen? Why are “Click Here” and “Read More” such a problem? Accessibility consultants, content strategists, and SEO experts all agree that there is a better way.

Context is key

There is a concept that really gets to the heart of this issue. It’s context. Let’s look at Yogi’s quote again. In the context of giving directions, those instructions aren’t very helpful, are they? Context should allow your user to determine the intent of the link as it stands alone. Think of your link text as a signpost on the information highway. If all the signs read the same, they will not be helpful – let’s think of an exit sign. After veering off the road a couple of times and not actually reaching your destination, you’ll return to the road and keep trying only for so long. Then you’ll be upset, confused, or even angry the rest of your trip. Needless to say, you won’t ever travel that route again.

Back to your pages. Now visually, “Click Here” text usually might make sense; there are clues that allow your visitors an understanding of where the link will take them. Proximity of the link to a news article is a pretty typical example. But let’s take this a step further. A user who relies on screen reading technology can navigate a web page by generating a list of links, then scanning that list to determine where they want to go next. What if all those signposts read the same? Yep. Confused visitor.

Know the rule

You can see that the intent of the criterion is based on this concept of context—it’s even in the name:

2.4.4 Link Purpose (In Context):
The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general. (Level A)

WHAT IS ASSISTIVE TECHNOLOGY?

Assistive technologies are tools and methods used to make web information available to people of all abilities. With the leaps and bounds made in technology in the last few years, you may not be aware of all of the different kinds of assistive technology available.

Let’s look at some technologies that have made significant changes to the way web pages are interpreted.
A RANGE OF DIFFERENT ASSISTIVE TECHNOLOGIES

Assistive technology is a term that includes devices used to assist with completing day-to-day tasks. People with disabilities may use them to eat, groom and travel. There’s a broad spectrum of assistive devices, ranging from specialized motor vehicles to specifically modified computer input devices. While these are all considered assistive devices, our focus today is on computer or web-based assistive technologies, which may be in the form of either hardware or software. For example:

- Did you know that computer operating systems have many types of assistive technology already built in?
- Did you know that many people with disabilities don’t need additional devices to operate their computers and other equipment?
- Did you know that apps on mobile devices are extremely powerful and have become one of the largest areas of assistive technology?

When we discuss assistive technology, the most recognizable equipment is a screen reader. Screen readers come in different forms: software-based technology like JAWS®, and hardware-based technology like braille displays and screen magnifiers. JAWS® reads aloud the text on the screen and gives the user a set of tools for navigating and accessing web pages and screen content.

A refreshable braille display is a device that displays braille characters by dynamically moving round-tipped pins up through holes in a flat surface. Blind users then read the braille output. Braille displays work in conjunction with screen reader software.

Other assistive devices you may be less familiar with include devices which assist with both cognitive and mobility disabilities are switches. Switches often look like buttons, but may come in a wide variety of styles and functionality depending on the action used to activate them.

MAKE YOUR NEW WEBSITE ACCESSIBLE FROM DAY ONE

If you are about to redesign your website, now is a good time to focus on getting a website that can be used by as many people as possible. Here are some tips on when and how to make requirements and focus on accessibility throughout the redesign process.

Requirements specification

When you are writing your accessibility requirement specifications for your web development team, it is important that you use the right standards. The best standards are the international guidelines for accessibility outlined by WCAG. In web design projects, it’s fairly common for the buyer to request that the website be designed in conformance with WCAG 2.0 on level AA, however this requirement may not be as straightforward as it would appear at first glance. Halfway in the redesign process, how will you determine whether or not the website meets your expectations? Our recommendation is that you explicitly state the individual success criteria which you wish to have compliance with.

Have your website developer state if and how this is going to be complied with. Define the following, in a table or similar, for each accessibility criteria relevant to your new website:

- Reference to criteria: 1.1.1
• Description of criteria: Non-text Content: All non-text content that is...
• Notes on criteria: This is relevant for images, ...
• Developer’s field for description of solution: Leave blank for developer to fill out.

Do the same for all the criteria. You can also state, if a criterion is an ultimate requirement or a desirable requirement.

It’s also important that the CMS used to build the website helps web editors publish accessible content. Make requirements on how this should be ensured. You can pick the necessary check points from the guidelines on accessible authoring tools ATAG (these guidelines dictate that the tool generates accessible web content, helps web editors to publish accessible content, and that the tool itself is accessible). In my experience, you’ll want to explicitly state requirements for:

• how to handle alternative texts for images;
• how to use headings;
• how to create accessible data tables;
• how to make quotes (< q > and < blockquote >);
• how to enter page titles;
• how the HTML code created by the CMS complies with the W3C standards;
• how to tag change of language in the text entered

Consider also your organization’s design manual and if there are any contradictions with the accessibility guidelines. For example, there are specific accessibility guidelines on the contrast ratio between background and text colors. For this reason, it is important to use ‘accessible’ color combinations.

**Design and development**

A handful of the accessibility criteria are relevant when starting the phase of designing and doing wire frames. Think about navigation, the use of headings, colors, link texts and descriptions in places where the user is supposed to click, fill out, or choose content. When it comes to the process of development, most of the accessibility criteria are relevant. Therefore, it is important that the people developing the solution have a solid understanding of accessibility. Make sure you test the solution during the process from start to finish. Do not wait until the acceptance test. By then it’s nearly impossible task to correct possible errors and shortcomings before the site goes live. It’s especially important that the templates for different pages are tested as early as possible before building on them, to avoid spreading mistakes to hundreds or thousands of pages.

**PUBLISHING CONTENT**

Make sure you train web editors on how to publish content the ‘accessible way’. This way, when content is added both in the development phase and after you’ve launched, it furthers your site’s accessibility rather than introducing new accessibility issues.

**MEDIA PLAYERS, FORMS, AND OLD CONTENT**

Areas often being neglected include integrations with third party solutions, such as media players and forms. Remember these in the process. They should also be accessible!

Also think about content being migrated from the old system into the new. The WCAG specifications differ between HTML/XHTML versions. There might also be content from the old system that is not accessible. After all your hard work, the last thing you want is to carry old problems over to your new website.
We’ve been receiving lots of questions about WAI-ARIA, or ARIA, so we’re going to go over a few of the basics of using (or not using!) ARIA on your web pages. Static-paged websites are increasingly being replaced by dynamic websites. Developers are creating widgets and controls entirely with a combination of JavaScript, HTML, and CSS, and this has the potential to noticeably improve the usability of the web. Yet, many users are still being excluded because of accessibility.

**WHAT IS WAI-ARIA?**

A set of attributes for filling accessibility gaps

HTML5 is the latest version of the HTML specification. ARIA is not a version of HTML, it’s an addition to HTML. It’s a set of characteristics that supplements HTML’s capabilities by using additional attributes. The main purpose of ARIA is to allow JavaScript to communicate dynamic changes taking place on the page to assistive technologies.

Dynamic content can be especially challenging for users who are unable to view a screen. Live updates, progress bars, and personalization can modify the DOM in ways that assistive technology can’t detect. That’s where ARIA comes in. By further defining attributes like roles and states, assistive devices can better determine what the element is. This in turn allows the user a better understanding of relationships between elements, the state of an element, and how to interact with it.

A compliment to HTML semantics

Semantics are the implied meaning of a subject, and in our case, HTML tags. HTML tags serve both humans and machines by suggesting the purpose of the content enclosed within the HTML tag. Examples include H1-H6 tags to notate headings, and LI tags for list items. HTML5 introduced semantic tags whose purpose is to do nothing but help better identify the contents they contain. These tags don’t replace generic container dius, but compliment them by adding semantic meaning. ARIA can be used with both HTML5 and XHTML.

**A W3C Specification**

WAI-ARIA is the Accessible Rich Internet Applications specification from the W3C’s Web Accessibility Initiative. ARIA attributes are intended to be understood by the browser and translated to the operating system’s accessibility APIs. When ARIA is present, assistive technologies are able to interact with JavaScript. Screen readers work with regular HTML, but adding ARIA can provide screen reader users more context.

**WHAT ISN’T WAI-ARIA?**

ARIA has no effect on how page elements are displayed or behave in browsers. ARIA as a specification is designed as a descriptive layer for screen readers, added right into your HTML code. An example of this is a button: a “real” button element has added keyboard focusability, an automatic click handler, or other properties that are inherent to the button element. A “div” with the button role will still need all of this additional functionality coded in to make it as accessible as the native button element. That said, “if you can use a native HTML element [HTML5] or attribute with the semantics and behaviors you require already built in, instead of re-purposing an element and adding an ARIA role, state, or property to make it accessible, then do so.” http://www.w3.org/TR/aria-in-html/

A Band-Aid

Okay, this could go either way. Some people call it a Band-Aid meaning that the use is really just covering up the underlying accessibility problems in the code. What I’m saying here is to NOT use ARIA in this manner. Don’t add ARIA just because you can. Just like all of your code, use it sparingly, where it will make the most impact for assistive technology. Jared Smith talks about it in his excellent post “Accessibility Lipstick on a Usability Pig”:

“As ARIA is increasing in popularity, it is quickly becoming the accessibility lipstick of choice. And some sites are smothered in it, yet beneath it all, they are still just pigs. While ARIA is a powerful tool for filling the accessibility gaps for screen reader users, if all you have is an ARIA hammer, everything starts to look like a nail.”
A replacement for good coding practices

As previously stated, adding ARIA support to a web page will not change the behavior or presentation of the pages to sighted users, so all of your clean, semantic code will have a positive effect on ALL of your users. Using semantic structure first, with a dash of ARIA thrown in as needed will give your site’s visitors the best experience.

EXAMPLES OF WAI-ARIA

Most of the ARIA specification is intended to be used in web applications. ARIA attributes are defined in the specification and are divided into roles, states, and properties.

Roles

Roles are used to describe the structure of the web page. Roles can also act as navigational landmarks, and roles can also describe the type of widget presented. For more information and a complete list of ARIA roles, visit the W3C ARIA Roles page.

States

States are more dynamic and are typically updated with JavaScript as a user interacts with a page. States describe the current state of an element, notifying assistive technology if it is busy, disabled, selected, or hidden. For more information and a complete list of ARIA states, visit the W3C ARIA States page.

Properties

Properties often describe relationships with other elements and for the most part, do not change once they’re set. Properties describe characteristics of these widgets, such as if they have a required component, or have a pop-up associated with them. For more information and a complete list of ARIA states, visit the W3C ARIA Properties page.

PRACTICAL USE OF WAI-ARIA

Navigation

ARIA landmarks are attributes you can add to page elements to define areas of content or navigation. When you add these attributes, it allows screen reader users the ability to move around from section to section of your page and know where they are going.

Form Controls

Always use a label element whenever possible. It’s still the most supported technique for screen reader support. Use "aria-describedby" in cases where you’ve exceeded the information presented in the label element, like additional instructions for filling out a form field.

Tables

"aria-describedby" is also useful for providing summary information for tables. If you happen to have a page that uses a table for layout purposes then you could add role=presentation to remove the native semantics from the table, the table row, and the table cell. This will aid in hiding the table structure from assistive technologies.
HOW TO CODE ACCESSIBLE TABLES

There are many appropriate uses for tables on websites, but the problem lies in understanding the proper way to make those tables accessible for all users. Don’t panic, tables are not to be feared or avoided! With some careful planning and a better understanding of the different table elements and attributes, you too can add usable data tables to your web pages.

LAYOUT TABLES VS. DATA TABLES

Tables have been used for page layout since the early days of the Web. Due to advancements in both W3C recommendations and coding capabilities, table layouts are becoming another distant memory, as they may cause considerable accessibility problems. The presentation and layout of web page elements can and should be controlled through appropriate cascading style sheets (CSS) and tables should be used to display data only.

USE THE SIMPLEST TABLE POSSIBLE

Simple Tables

A simple table basically means that there is only one header row and one header column in the table. A header specifies the type of information in the row/column. There are no merged cells within a simple table. Once we have merged cells, we need to approach the table as a complex table, which have different coding considerations. It may even be preferable to create more than one simple table instead of using a complex table.

Complex Tables

Sometimes, complex tables are required. Some data tables may require more than one level of row and/or column heading. Most people will not find this a problem; visually the table is logical. However, Assistive Technology, like screen readers, will need very specific instructions to correlate these extra levels of headings to the information contained in the data cells.

MARKING UP TABLES

The very first step toward creating an accessible data table is to define row and column headers. This is easy enough to do. In the markup, the <td> tag is used for table data cells and the <th> tag is used for table header cells. Simply changing the appropriate <td> tags to <th> tags signifies that the information within the cell is different from the information that still sits in a <td> cell. The location of the cell does not change. Now before you say, “That was easy,” be aware that this is just the first part of making that simple table accessible. It gets a little more complicated, but not too complicated.

ASSOCIATE DATA CELLS WITH APPROPRIATE HEADERS

Now that we’ve created headers, we need to associate the cells with the appropriate headers. There are two ways to associate data cells with their headers.

The Scope Attribute

The scope attribute tells the browser and screen reader that everything under the column is related to the header at the top, and everything to the right of the row header is related to that header. By specifying the “col” or “row” attribute in addition to the scope attribute, you’ve tied that column or row to the correct header. A screen reader now has the instructions it needs to present the table correctly.

Headers and ID Attributes

Another way to accomplish this is to use the headers and ID attributes. This method is NOT recommended for simple tables, but may be useful in complex tables. The headers and ID method should only be used when there is more
than two headers with a data cell. Stick with the scope attribute unless your table is more complex and the scope attribute will not do the trick.

PROPORTIONAL SIZING

Use proportional table sizing rather than absolute or fixed-pixel sizing. Let the browser window determine the width of the table whenever possible. By establishing a fixed width on a table, you are not allowing the table to flow into the viewport area available. Luckily, this is becoming a more standard practice now that we are planning and implementing responsive website layouts.

OTHER TABLE MARKUPS

<caption> Tags

Tables should have some sort of identifying title or caption to them. Using the <caption> tag can do this, and you can add the <caption> tag right after the opening <table> tag. It is not absolutely necessary to have <caption> tags on every data table for the sake of accessibility, but it is still a good practice. And of course all of these additional attributes and tags can be styled appropriately with your cascading style sheets.

Summary Attribute

The summary attribute is not a requirement for simple tables, but can increase the comprehension of more complex tables for people using screen readers. A good summary can highlight the important elements of a table, and help the user to know what data can be found in the table. A good practice is to only use table summaries when they do what they were designed to do: summarize complex data.

HOW TO CREATE ACCESSIBLE PDFS

PDF files are in many cases the only way for website visitors to access certain content. They are the best file option for making secure and downloadable documents, for printing documents that need to keep a format, for providing a high level of detail in documents, and for creating interactive forms, as well as documents with low usage. Therefore, the importance of making PDFs accessible to everyone should not be underestimated.

For a document to be accessible it has to contain information and content that all users can access, read, and understand, regardless of disabilities. Preferably in a way that doesn’t require a time-consuming remediation tool.

Here are some best practices for making PDFs accessible:

• Define the language the document is published in.

• Provide the document with a descriptive title.

• Use built-in features within the authoring tool, commonly called tags, to define headings, paragraph texts, lists, tables, alternative text for images etc.

• Ensure that the document has a proper reading order so that users with assistive tools can access the document.
• Check the PDF after conversion by using an accessibility checker such as Siteimprove Accessibility.

• Make sure the security settings of the document allow for assistive technologies to extract text.

So does this cover all possible accessibility issues that may be present in a document? No, but it does address major PDF accessibility areas and will ensure that most users are able to access and read your PDFs. Our personal mantra is “Better to be accessible to 90 % of your users than to 60 % of your users!”

To promote usage of PDF files the Matterhorn Protocol was created, which outlines a group of 31 checkpoints with 136 possible failure points when creating a PDF. Although PDFs are not recognized by W3C, the best guidelines to fulfil the criteria for accessible PDFs are addressed by the 23 WCAG PDF Techniques. Keep in mind that compliance to the Matterhorn Protocol does not automatically ensure that you comply to WCAGs accessibility standards. So when you create a PDF, you should keep in mind that:

• HTML achieves accessibility better than PDF.

• Most PDFs on the web should be HTML.

• Many websites have a ‘Print to PDF’ feature.

• Some documents (Word, Excel, etc.) should be created as PDFs before uploaded to a website.

Digital accessibility is important in all facets of your organization. While many organizations are on the right track to making their websites and company-owned digital presence accessible, the potential issue is with many social media platforms that are not up to accessibility standards.

This is a tricky accessibility issue. There is only so much you can do in terms of how accessible you can be because you are not the owner of these platforms, which means your organization is confined to how accessible the platform is.

What do you do? How can you become accessible on social media? Let’s take a look at several popular social media platforms that many organizations use and discuss possible ways to improve accessibility on these social channels. With so many recent updates, we too at Siteimprove are learning how we can be more accessible on our social channels!

HOW TO BE MORE ACCESSIBLE ON TWITTER

Twitter just made a new change that allows users to caption images posted through the mobile app. Since research shows that tweets with images receive 150% more retweets than tweets without images, many organizations are taking advantage of tweeting with images.
While this new update is only for mobile, it is still possible for your organization to take advantage of it. Just as with applications like Instagram and Snapchat, your social media gurus are posting from their phones. Twitter makes it easy to switch between profiles, so your employees could add the organization’s profile to their mobile app and post images for your company from there.

All you have to do is go to the Settings menu on your account, tap on Display and Sound under General, then tap on Accessibility and turn on compose image descriptions. Then when someone from your team uploads a photo, it is possible to add a description in the bottom left corner. While this isn’t ideal for organizations using social media automation or marketing automation tools, it is a way to make images more accessible on Twitter for now.

Another great resource is EasyChirp, which allows you to tweet an image with a caption and long description from your desktop or laptop computer, as well as mobile devices.

HOW TO BE MORE ACCESSIBLE ON FACEBOOK

Another major social player, Facebook, just released new technology – automatic alternative text. This could revolutionize the way the world’s 285 million visually impaired people are able to interact with Facebook. Basically, automatic alternative text recognizes content of certain images and those with screen readers will hear a description of basic image categories, such as cars, airplanes, trees, water, and people smiling.

In addition to the new alt text technology, there are still some things you can do as an organization to be more accessible. You should think through a good user experience and share useful information on videos or images:

• Add captions to your videos by clicking on ‘Edit’ after posting it so you can add a .SRT file, which is the caption text file

• Describe your posts to provide an ‘alt text’ to images your organization is sharing or add a comment to a post with a description of the image/video

• Follow the Facebook Accessibility page on Facebook to be the first to know about new updates
HOW TO BE MORE ACCESSIBLE ON INSTAGRAM

Instagram overall provides a good experience for users with disabilities. Since it is an image-sharing social media platform, when people provide detailed descriptions of what they are posting, then the image has in a sense has ‘alt text’.

Both Android and Apple mobile phones have general settings where people with disabilities can update accessibility preferences. The zoom-in feature can help those who have a hard time seeing the photos in the size of the application. So what’s the best approach as an organization? Ensure you add descriptive text to the images you’re posting. Instagram gives you a good platform to be as accessible as you can, because you have no character limit. So be descriptive, but also keep the message easy to understand and concise.

HOW TO BE MORE ACCESSIBLE ON SNAPCHAT

DigitalGov recently made a step-by-step guide on how to be as accessible as possible with Snapchat stories. They recommend storyboarding your Snapchat story, just like you would with videos you post on Vimeo and YouTube so that you take accessibility into account up front.

That way, you can download each file of your Snapchat story and record audio for each snap. Uploading the snap screenshot images with audio on one of your video channels, YouTube or Vimeo, can provide a more accessible version of your Snapchat stories.

HOW TO BE MORE ACCESSIBLE ON YOUTUBE AND VIMEO

Videos are a huge area where your organization has an opportunity to be accessible. Both YouTube and Vimeo are widely used by organizations and offer ways to be more accessible. It is important to mention keyboard traps in reference to online video players. A keyboard trap “occurs when a person who uses a keyboard cannot move focus away from an interactive element or control using the keyboard alone.” In other words, a user can enter a video player using a keyboard, but cannot get back to the original page. That’s why your team should test and eliminate keyboard traps.

For YouTube:

Ensure all videos have closed captions, an audio description, and a full transcript (when possible because a transcript is useful for both those with hearing and visual impairments). While YouTube provides a feature that automatically captions videos less than 10 minutes in length, you should be cautious to make sure the transcript is accurate.

For Vimeo:

Vimeo partnered with Amara at the end of 2014 to help users make accessible videos for all. You can read about the accessibility updates on the Vimeo Blog. So now, in the same sense of YouTube, your organization can include closed captions and subtitles by utilizing the Amara editor, which is available to all Vimeo creators for free.

At the end of the day, many of the same accessibility best practices for your website should be considered on social media. You want to provide the best user experience for all your web visitors, whether they have a disability or not. We can all take the same approach with social media.
GUIDE TO ACCESSIBLE WEBSITE MULTIMEDIA

According to HubSpot, multimedia content is more engaging and shareable than its text-only counterparts. Making this content more accessible for your users is a simple process, so long as you take web accessibility guidelines into account while adding this kind of content to your website. With improvements in bandwidth, as well as browsers and media players, you have an opportunity to deliver an engaging, rich media experience to your visitors. Unfortunately, if you don’t prepare properly, the experience will be less accessible, and more frustrating to your visitors.

WCAG TIME-BASED MEDIA CRITERIA

Guideline 1.2 Time-based Media:

This guideline says to provide alternatives for time-based media; the purpose is to offer equal access to multimedia content. What is time-based media? Time-based media is simply a term that represents different formats of content that purposely changes or flows over time. Examples may include:

- Movies
- Audio clips
- Or animations

Let’s try to keep this simple. If you are using pre-recorded or live media, (video or audio), you need to be sure there are transcripts, captions, or audio descriptions available.

- Offer a transcript or audio description for pre-recorded video content or pre-recorded audio (1.2.1, A)
- Provide captions for pre-recorded multimedia (1.2.2, A)
- Offer captions for live multimedia (1.2.4, AA)

"Wait a minute," you say, "you mentioned animations..."

We’re glad to see that you’re paying attention! Just be sure that your animated content has an acceptable text description.

Pro tip 1: Captions and transcripts are good for searchability and SEO.

KEYBOARD TRAPS

What is a keyboard trap? A trap is when you are able to use the keyboard to navigate to a component or feature of a page, but then unable to navigate away from that feature.

Media player accessibility

A common example of a keyboard trap is typically a media player. Just be sure your users are able to navigate through or past the player with the keyboard.

Pro tip 2: Be sure to design focus states so the keyboard user can see the active component on the screen.

VIDEO DELIVERY SYSTEMS

YouTube

Using YouTube for video delivery is a good idea for a variety of reasons. Not only is it a free service, but it also has global reach, and is incredibly reliable. YouTube has done a pretty good job of providing accessible accommodations, too. That said, there are a few problems to consider. Keyboard traps can be a problem with embedded players, so be careful when developing your video delivery system. Be sure to use the HTML5 version of the YouTube player instead of the Flash player; It's much more accessible.

With a quick Google search for YouTube and accessibility, you will see a variety of resources for screen reader users, captioning services, and accessible player APIs/scripts. With such a large community offering accessible solutions, you should be able to offer accessible YouTube videos on your website. If you are unsure if your videos are accessible, you will want to rely on a screen reader user to fully test your video player.
Vimeo

In January 2014, Vimeo updated its web-based video player with an HTML5 version, which greatly improved video delivery and accessibility. While there may still be room for improvement, the Vimeo player has good keyboard and screen reader support, and also supports captions and subtitles. You can consider Vimeo as a solid video delivery solution, especially as they continue to consider accessibility in future updates.

HTML5

Before HTML5, online videos could only be played using a plug-in like Flash. The `<video>` element of HTML5 offered a better, standard way to add video to a website. Cross-browser support and an almost unlimited library of scripts have allowed HTML5 to become the de facto method for online video. Mobile devices also offer excellent support for HTML5 `<video>`.

GUIDE TO ACCESSIBLE SEMANTIC MARKUP

HTML was originally designed to deliver documents with a structure that represented the importance and order of information. The creators of HTML were actually scientists who wanted a way to share technical documents. They didn’t really care about the visual look of the document as viewed on a screen—it just needed to correctly convey the information.

Semantics and accessibility are a part of HTML by design. Still, they are not useful unless used appropriately. Understanding how to write semantic code properly means knowing how that code works, and how users and machines will read it.

Semantic markup is a fancy term for common-sense HTML usage: if you write a headline or section heading, mark it with a heading tag (`<h1>`, `<h2>`). If you write paragraph text, place the text between paragraph tags (`<p>`...`</p>`). If you wish to emphasize an important phrase, mark it with strong emphasis (`<strong>`... `</strong>`). Never choose a HTML tag based on how it looks in a web browser. You can adjust the visual presentation of your content later with CSS to get the look you want for headlines, quotations, emphasized text, and other typography.

HTML also contains semantic code elements that are not visible but are extremely useful behind the scenes. There are code cues that make “reading” the page with assistive technology not only possible, but also efficient. Remember—we are simply providing good instructions with our HTML, and those instructions need to work well with assistive technology, too.

SEMANTIC HTML STRUCTURE

Content, Presentation, and Behavior

Separating the content from the presentation and from the behavior allows us more efficient control over the different elements that make up a web page. For example, by keeping the presentational elements (styles) isolated in a separate CSS file, we can quickly change the look of a single element or restyle the entire site without ever having to touch the content.
Semantic vs. Non-semantic (Presentational) tags

By using semantic tags and styles instead of using presentational tags, which are only visual, the meaning is not carried through by a technology that only reads the code.

Deprecated presentation tags

For every presentational tag that has been deprecated, there is a CSS equivalent:

- `<center>` tags can use a `text-align` property.
- `<bold>` tags can use a `font-weight` property and so on.

THE WEB STANDARDS MODEL

Structural Semantics

We’ve discussed semantic elements that affect our text many times; elements like `<h1>` – `<h6>`, `<p>`, and `<i>`. Table-based layouts were slowly replaced by containers called `<div>`s and `<span>`s. These elements are considered generic and don’t really offer any semantic value. But now we have HTML5...

HTML5

There are elements introduced in HTML5 that help considerably with structure and truly give us meaning to our web page containers. A partial list includes:

- `<header>`
- `<main>`
- `<article>`
- `<aside>`
- `<footer>`

Text-level Semantics

Let's stick to the basics and think about a few of the text-level elements as replacements for the deprecated presentation tags we talked about earlier. In fact, some of those tags are available for use within the HTML5 specification. The key here is that the tags have a purpose; there is meaning behind these tags. Examples include:

- `<strong>`
- `<em>`
- `<small>`
- `<code>`

WAI-ARIA

WAI-ARIA is a specification that has been added specifically to add accessibility and semantic value to a web page. An example would be to specify a list of links as a navigation menu. WAI-ARIA roles may be helpful with scripting, dynamic content, and advanced user controls. Examples of WAI-Aria roles include:

- `<alert>`
- `<checkbox>`
- `<slider>`
- `<tab>`
- `<tabpanel>`
- `<treeitem>`

REAP SEO BONUSES BY MAKING YOUR WEBSITE ACCESSIBLE

Best practices for search engine optimization and web accessibility have many overlaps, and with a little consideration you can actually make your website both more searchable and accessible at the same time. By prioritizing the five following areas of overlap, you can work more efficiently with your website management.

Accessibility aims at making web content available and usable for as many visitors as possible, including those who are limited in their digital activities by a disability. Search engines are, in a sense, blind, for they cannot 'see'
images, video content, and JavaScript. The ability to have web page content interpreted and rendered mechanically is therefore of great importance to both search engines and users of assistive technologies. Fix accessibility issues and boost your SEO by ensuring the following:

1. **PAGES THAT CLEARLY COMMUNICATE THEIR TOPIC**

   The page title is the most important on-page SEO element. Therefore, the page title should describe the page content accurately, include important keywords, and be unique for every page. At the same time, the page title is the first thing a screen reader renders to the user. For this reason, it is important that the page title provides a good description of what is expected from the page content.

2. **CONTENT THAT IS STRUCTURED IN A READER-FRIENDLY WAY**

   Headings must be ‘real’ headings (with <H> tags) and not just styled to look like one, in order for search engines to recognize them as headings. Every page must have one H1 heading (the most important heading) where important keywords should be included. To make the page more readable, you can divide it into sub sections with H2 sub headings – ideally also including important keywords. If you have a visual impairment and are unable to get an overview of a web page visually, you need to have an overview in another way. This can be done by pulling out a list of headings on a page, which is why it is important that these are actually coded as headings, and that they are used to divide content into logical sections.

3. **INFORMATIVE IMAGES**

   Alternative texts, or alt texts, were originally created to provide a text alternative to users that are unable to see an image. Search engines too cannot ‘see’ an image. Instead, they use the alternative text to understand what the image is showing and what its function is. Therefore, an alt text must describe the contents of an image. Make sure to include important keywords – but only if it makes sense in the context of the image. If a visually impaired user is not able to see an image it is often of vital importance that an image be supplied with an alt text that reflects the purpose of the image, for example: "View of Manhattan and the Empire State Building".

4. **MEANINGFUL LINKS**

   A link text, or anchor text, should describe the page that it’s linking to. Generic texts such as ‘click here’ and ‘read more’ do not provide any information to the search engine about the destination page. The same applies to users of screen readers when they try to get an overview of a web page. Often they may pull out a list of links on a page or tab between links, so it’s important that the link text makes sense also when read out of its context.

   "Click here" or "Read more" = Bad Link Text
   "Read more about SEO and Web Accessibility in this blog post." = Good Link Text

5. **SENSIBLE NAVIGATION**

   If you are referring the user to a certain area or element on a web page, make sure that you do it in a way that enables all users to find it. A screen reader renders content to the user in one long sequence. In other words, there are no design or columns when a user of screen reader receives content, which is why you should avoid that so-called ‘sensory instructions’ stand alone. For example, avoid saying: “You can find more information in the box to your right”. Instead, combine it with some text saying: “You can find more information in the box to your right with the heading ‘Information about...’” Search engines also do not understand sensory characteristics, so you aren’t gaining anything by saying “in the box to your right.” Instead use sensible (search) terms explaining what you are referring to.
EXTRA THINGS YOU CAN DO:

1. Transcribe video content

Search engines and visually impaired users are unable to ‘see’ video. Therefore, it is a good idea to make a transcript of the content so that screen readers and search engines can read the text and thereby make it available for search engines.

2. Avoid images of text

Text in an image is still just an image. To make search engines and read-aloud tools capable of reading the text it must be actual text and not an image of text, for example a jpeg-banner with a slogan not providing any actual text information. Furthermore, text in images cannot be adapted to fit users’ needs such as changing text size, font or colors.

3. Be careful with JavaScript in menus

Search engines are not always able to understand JavaScript which makes it a bad idea to use JavaScript in menus. Worst case scenario is that the search engines are only accessing the front page while all other pages are not found in search results. Always use ordinary text links in menus. Another issue is that menus and other content made with JavaScript can often only be activated by mouseOver and not via keyboard focus. This makes the web page work poorly, or not at all, if you are navigating by keyboard alone (and cannot use a computer mouse).

4. Provide the most important information first

Search engines, and sometimes users too, read a page from top to bottom (sequentially). Therefore, make sure that important content is given first.

INCLUDING PEOPLE WITH DISABILITIES IN USER TESTING

The benefits of involving people with disabilities in your web projects will far outweigh the extra work, as you’ll be gaining a much deeper understanding of how users with disabilities are motivated, how efficient your site may be, and how effectively all of your users can be while using your site.

ACCESSIBILITY OR USABILITY?

First, let’s cover the common question of whether an issue is about accessibility or usability. In most cases we can say that it’s both. So much of what you do to improve usability has a positive effect on accessibility. For example, a clean, well-designed navigation system makes it easier for all of your users to find the information they are looking for. Usability is concerned with effectiveness, efficiency, and satisfaction—and accessibility is considered a subset of usability—so a website can’t be considered usable unless it’s accessible.

ACCESSIBILITY COVERS A RANGE OF ISSUES

Many people still see accessibility issues as affecting only a small group of people. In fact, accessibility covers a very broad range of disabilities. On one end of the spectrum, there are those with serious mental or physical disabilities—usually pretty easy to define.
What about the other end? What about people who wear glasses? People who are color-blind? Those who have dyslexia? What about those people who prefer using a keyboard instead of a mouse? Do they fall within the range of disabilities (yes!) and how do you address the issues they may have?

**FINDING PEOPLE WITH DISABILITIES**

You’ve made the wise decision to include people with disabilities in your project. What next? “Where can I find a person with a disability?” you may be asking yourself. There are numerous ways to engage people with disabilities, and the ease of finding a willing collaborator may vary according to your industry and type of organization. Don’t fear; there are many great resources available.

For example, if you are working in a higher education environment, check with your campus disability services office. There are students and even faculty or staff members who are willing to participate and can give you excellent feedback.

**WHEN DO I INVOLVE PEOPLE WITH DISABILITIES?**

Another question that comes up as you engage with your new consultants is when to actually get them involved? From a planning point, be sure to get them involved as quickly as possible. They may not actually sit down and test your site until later in the process, but if you are not planning for their involvement from the beginning of the project, you will run into barriers that you should have already addressed.

**RANGE OF DISABILITIES AND THE NEEDS OF YOUR TESTER**

Be sure you understand the range of disabilities you will be planning and testing for. You may need to address different kinds of disabilities in your user testing, so a variety of software and hardware may need to be assembled before you get started. Your testers can give you specific recommendations based on their experience. You may need to gather hardware or software for:

- Keyboard accessibility
- Screenreader accessibility
- Cognitive accessibility

**WORKING WITH PEOPLE WITH DISABILITIES**

A little planning and knowledge of working with people with disabilities will make your web project flow quite smoothly. Considerations may include how you plan your testing location, what conclusions you hope to gain, and a few matters of etiquette.

It’s possible that you already have a suitable test environment already set up. Just be sure your accommodations for people with disabilities are really no different than you normally plan: a comfortable environment, which allows your tester to concentrate on the tasks you give them. That said, never make assumptions, speak normally, and always be aware of personal space. Given the proper setting, you will be amazed at the conclusions your testers provide. Be sure to carefully consider all feedback and avoid assuming that feedback from one person with a disability applies to all people with disabilities. A person with a disability does not necessarily know how other people with the same disability interact with the web, nor know enough about other disabilities to provide valid guidance on other accessibility issues.
This article focuses on the “gray areas” of interpreting the WCAG 2.0 guidelines, and help explain the degrees of disability that website owners and developers should be aware of when approaching an accessibility solution. Google the term, “degrees of disability”. Over 100 million results? That’s more than a few, isn’t it? From government agencies to higher education institutions, everyone has their own guide to help them determine levels of disability. What does this tell us? That it’s pretty challenging to determine or define a disability. We might have medical and government-recognized definitions that tell us what makes a disability, but day-to-day life isn’t so straightforward. People experience varying degrees of countless different conditions, and often one or more conditions at a time.

**DEFINING A DISABILITY**

When your organization tries to define a disability, your broadest definition should include:

- Disabilities with different sensitivities
- Visible as well as non-invisible disabilities
- Disabilities that have effects which may come and go over time
- Temporary disabilities

**RANGE OF DISABILITIES**

Let’s consider hearing loss. It’s clear even from this simplified scale that there are many grey areas between full hearing and total deafness:

Full Hearing > Mild > Moderate > Moderate/ Severe > Severe > Profound > Totally Deaf

With eyesight, there is an enormous range of conditions with various effects and limitations. Among them:

- Astigmatism
- Cataracts
- Color Blindness
- Farsightedness
- Glaucoma
- Macular Degeneration
- Near-sightedness
- Presbyopia
- Retinal Detachment

It’s also important to note that some of these conditions are not permanent, and that these conditions may be degenerative, gradually becoming more noticeable or severe over time. As we age, we’re all likely to go through different levels of visual, auditory, motor and cognitive impairments.

**ENVIRONMENTAL FACTORS**

There are certain impairments that aren’t necessarily related to the user. Environmental factors can have an effect on people, too. Some of those factors include:

- Low or limited bandwidth
- Too bright or too dark environment
- Noisy environments, like a coffee shop
- Mobile devices, game consoles or other devices
- Old browsers or operating systems
DEFINING A DISABILITY

What does this have to do with web accessibility? Why is it so hard to interpret the WCAG 2.0 guidelines? Let’s face it web accessibility is really a series of judgment calls. Is this color combination acceptable? It meets color contrast guidelines, but it doesn’t meet my organization’s color style guide. Is this “alt” okay? Did I organize my page headings properly?

To create an effective, accessible web page, you will need to understand a combination of WCAG 2.0 guidelines, semantic markup techniques, your organization’s rules (style guide), the perspectives of your users, and an almost unlimited number of other variables including logic, empathy, reasoning, and other interpretive skills. It sounds daunting, but with a little knowledge and training, creating accessible websites can become a natural process for digital marketers.

Doing accessibility well is a balance of accessibility principles, your site’s content, and your user’s needs. As a website professional, your task is to find that balance. Many times you will be better off considering usability principles over strictly following the WCAG 2.0 guidelines. While the guidelines are a great resource for learning, and give us a solid base to work from, remember that they are just that—guidelines.

COGNITIVE DISABILITIES AND WEB ACCESSIBILITY

While sight and hearing disabilities are the most talked-about when it comes to website accessibility, cognitive disabilities actually represent the largest number of computer users with disabilities according to the National Center on Disability and Access to Education.

So, why aren’t we more aware of cognitive disabilities? Well, because these types of disabilities contain a wide range of nuanced conditions and an even wider range of severity, so it’s difficult to present a comprehensive set of standards to which web developers should comply.

Let’s break down some of the different aspects of cognitive disorders. First:

WHAT ARE COGNITIVE DISABILITIES?

Simply put, Cognitive Disabilities are any and all conditions or impairments that inhibit a person’s mental process. The variations in type and severity are too great to list here, but many of these conditions are ones that we see and experience on a daily basis.

FUNCTIONAL VS. CLINICAL COGNITIVE DISORDERS

Cognitive disorders may be classified in two different ways, functional or clinical. Functional disorders focus more on the person’s abilities and which trials they face in their day-to-day lives. Some examples of functional disabilities include:

- Memory
- Attention
- Comprehension
Clinical disorders vary widely in severity, and how an individual may function. Examples of clinical disorders include:

- Autism
- Traumatic Brain Injury (TBI)
- Dyslexia

From our perspective as web developers, it’s better to think about cognitive disorders purely from a functional consideration. Why? For one simple reason: as developers we can focus on the barriers, not the diagnosis. By thinking about and presenting solutions, we can focus on improving our user’s experience.

**IDEAS FOR COGNITIVE WEB ACCESSIBILITY**

Simply by following good design, content, and coding practices, we can improve the user experience for many people with cognitive disorders. We often talk about coding and specific things like semantic markup, and while we need to continue to think about these techniques, we also want to think about what is showing up on the screen. When considering visual styles as well as content organization, we can improve the user experience by:

- Using proper headings, and lists
- Using more white space in your design
- “Chunking” content into more manageable pieces
- Making forms manageable by breaking them into multiple, sequential steps
- Providing a logical reading order
- Being consistent with fonts, colors, and locations of page elements
- Offering keyboard access
- Consider offering content in multiple formats

**WEB ACCESSIBILITY AND OUR AGING POPULATION**

A “Silver surfer” is an individual over the age of 50 who utilizes the Internet on a consistent basis. In this post, we’re going to address the issue of website accessibility and our aging population.

Approximately 20% of our population is living with some form of disability of varying severity. With age comes the potential for impairments or disabilities that can make it difficult to manage day-to-day activities. One of those activities involves interaction with the Internet, and the devices we use to access it. These “silver surfers” are engaging the Internet in a variety of ways that they may not have done in the past. Some of those uses include but are not limited to:

- Email
- Banking
- Medical resources
- Travel resources
- Government services
- Social media
- Shopping
- News and weather
HOW DEVICES AND TECHNOLOGY ARE CHANGING

Increased connectivity and availability has changed how everyone uses the web. We are more wired than ever before. While many seniors still do not use smartphone technology, tablets and e-book readers are important tools for this group.

Many seniors have also moved from the hand-me-down computers that one of the kids brought them and set up at Christmas time a few years ago. Gram used to just get pictures via email. Not anymore. She’s now on Facebook, she buys her own e-books on Amazon.com, and was even able to book her own flight to come visit last summer. We may still assist our parents in the purchase process, but more seniors are choosing their own devices based on their own unique needs.

Six in 10 seniors now go online regularly, and that technology has become an essential part of their lives. It’s extremely important that older users have their accessibility needs met. This can be done easily through correct coding procedures, browser settings, and in many cases may not require additional assistive technology.

CONSIDERATIONS

When older users are adopting these technologies, they may be faced with a different set of problems while learning to use them. They may deal with issues like physical challenges, conservative attitudes towards the technology, and with so many different kinds of devices available, there could be a steep learning curve for each different operating system and interface.

There is a wide range of disabilities to consider; some may be temporary, some are situational, and some are permanent. Some examples include carpal tunnel surgery (temporary), a noisy room (situational), or a combination of degenerative conditions that may permanently affect sight, hearing, mobility, or cognitive behavior.

Let’s look at some specific examples:

- Sight – reduced contrast, color perception, and focus make it difficult to read webpages
- Hearing – difficulty hearing sounds or separating sounds make listening difficult, especially on mobile devices.
- Mobility – the individual may have reduced dexterity or fine motor control, which makes it difficult to use a mouse or difficulty clicking on small link targets.
- Cognitive – these symptoms may include short-term memory loss, unable to concentrate, easily distracted, and difficulty following navigation and finishing online tasks.

THE BUSINESS CASE

For both people with and without disabilities, accessible website coding removes these barriers. An accessible site is one that everyone can use and benefit from. Nearly a billion people on earth have some form of disability and that number continues to grow. There is a huge amount of talent, wisdom, skill, and productivity wasted when people with disabilities are unable to participate in the process.

Leadership, marketing, designers, developers, and legal experts all should be aware of building accessibility into the products that people use every day. The W3C is much attuned to this trend and has a wealth of information available online. These resources include the WAI-AGE project, which gives us a better understanding of the needs of older web users, development of educational materials, and a better overall understanding of this issue.
13 TIPS FOR IMPROVING YOUR WEBSITE FOR MOBILE USERS WHILE ENSURING ACCESSIBILITY

One of the main principles of accessibility optimization is to ensure platform independence, which ensures the website is usable on many different platforms. If you ensure that your website is conforming to the Web Content Accessibility Guidelines, you will find that your accessibility for mobile devices is ensured to a large extent as well.

A number of principles are relevant when using best practices for web accessibility on mobile platforms. Here are 13 tips on how to fix the most common problems faced by mobile web users.

DESIGN

1. Layout
   Design in a way that makes the website work when users can only see a small part of the screen at a time, when they are browsing with mobile units. Some disabled users use zooming software to help them read the page, which creates the same issues imposed by the small screen on many smart phones. Avoid a situation where the user has to scroll both vertically and horizontally, and avoid images that are larger than the screen.

2. Use of color
   It is important to avoid creating features or giving information solely based on the user's ability to see colors. Some users are unable to see or differentiate between certain colors. It's also important to make sure the contrast between the background and the text is sufficiently high.

   Also, make sure to avoid giving instructions that are color-dependent. (A color-dependent way of giving instructions can be to write: “click on the green button” or “in the blue box to your right you will find more information”. If these kinds of descriptions are used make sure to supplement them with a text reference also, such as: “click on the green button labeled ‘Send’ or ‘in the blue box to your right with the heading ‘Events’ you will find more information”).

DEVELOPMENT

3. Following standards
   Make sure to follow the standards on the format which you have chosen to publish in. Having clean, validated code helps to ensure that the content is shown in a consistent manner across different platforms and enabling assistive technologies to render content in a meaningful way to users.

4. Order of content
   Make sure content is wrapped in a sensible way and that content makes sense from the document order and when linearized. This ensures the content order is meaningful regardless of how the user accesses it and how much CSS is supported by their device. Tables commonly don't work well on small screens. Consider if there is an alternative way to give tabular content.

5. Navigation
   Make sure links and forms are navigable when tabbing through content.

6. Plugins
   Avoid making it required for users to install plugins to be able to use content. There might be situations where these are not supported or do not work with certain types of assistive technologies a user might need.
7. Sound and warnings
Avoid giving warnings and other significant information by the use of sound. Some users are not able to hear this either because of a hearing impairment or because of a situation such as being in a location with background noise that makes it hard to hear.

8. Entering data
It may be difficult for some users to enter information by the use of the limited keyboard available on a mobile unit. Make sure to use radio buttons, check boxes and combo boxes when user input is needed. This way, users have to enter as little text as possible via the keyboard.

When users are entering data, make sure to prompt them and help them when they make mistakes. Make sure to technically do this in a way that ensures that it works with voice over and the likes.

9. Page titles
Give each web page a meaningful, short descriptive title. This helps users to ensure that they are on the right page.

COMMUNICATIONS

10. Links
Make sure all links have a text or a description that makes sense also when read out of context. Some users navigate between links and for this reason they are dependent on the link text indicating what the link is for.

11. Words and sentences
Avoid complicated words and long sentences. These are not very well suited to mobile units and they complicate things unnecessarily for people with reading difficulties.

12. Subtitles
Multimedia content such as video and sound must be provided with subtitles. In this way people who cannot hear and people with lots of background noise will still be able to understand the content.

13. Images and alternatives
Make sure that when content is non-text, such as images, it has a text alternative. This way users who cannot see and users who have disabled images on their mobile devices can still use the content. Avoid using CSS image replacement and make sure not to use images of text.

More information
W3C has developed a set of documents describing how to best create units and apps for mobile units. You can also read more on how these are connected to the web content accessibility guidelines. They are connected from two different starting points: If you would like to learn or if your starting point is web accessibility and you need to learn more on mobile units.
In November, Oxford Dictionaries made history by not naming their “Word of the Year” after a word at all. For the first time ever, an emoji character known as “Face with Tears of Joy” was named “Word of the Year” for 2015.

Why? Oxford Dictionaries explained that the “Face with Tears of Joy” emoji was chosen because as a form of communication, it’s particularly unique due to its overwhelming use worldwide. Emoji’s can extend beyond language barriers to be used as a “nuanced form of expression.”

That’s pretty powerful stuff. A smile used to be universal, but now, you may have a better chance with emoji’s. Have emoji’s affected our day-to-day interactions to the degree of breaking down language barriers? Absolutely. Are they the new shorthand method of communicating, the golden egg to cracking the millennial demographic?

Maybe so...

But not for everyone.
Major brands are all aboard the emoji craze, from Chevy disseminating an entire press release in emoji’s to Coca-Cola sponsoring a special soft drink emoji on Twitter. Thanks to Domino’s Pizza, you can now have a delicious slice at your fingertips simply by tweeting a pizzamoji. But while marketers everywhere are embracing emoji’s, they may be excluding a large portion of their audience.

“WHY DID YOU SEND ME ‘HOUSE WITH A YARD’?”

BBC Radio recently hosted a podcast on how smartphone users with disabilities interpret emoji’s. The main interview featured a media professional who is blind and uses the iPhone VoiceOver software. To demonstrate, he asked his colleagues to text him emoji’s they use in everyday conversation. The podcast hosts quickly found themselves trying to explain the greater significance of several emoji’s, breaking down jokes and relating emoji’s acceptable uses in pop culture. Like in the case of our “Word of the Year,” the “Face with Tears of Joy” wasn’t always used to convey that literal reaction. It could often be used in a “laughing until I cry” scenario, or “this is so good, it cracks me up.”

Wired explored this phenomenon more in-depth, noting that ‘Emoji is like any other language. It changes. It evolves. It reflects the times, and the people using it.” Although Unicode chooses which emoji’s to include on the Emoji keyboard and dictates their standards, emoji’s are constantly expanding beyond their definitions.

As the BBC Radio podcast hosts discovered, screen readers can say what an emoji practically is by relaying the Unicode definition; in one of their examples, iPhone VoiceOver interprets an emoji as “a house with a yard.” But how is a house with a yard relevant to the conversation? Is there a deeper meaning? Is there a greater social reference taking place that users with disabilities aren’t able to interpret because they can’t see it in its original form – a visual object? On the flipside, many screen readers are getting better and better at interpreting emoji’s. The BBC Radio interview went on and the VoiceOver user was able to get the gist of an emoji conversation, with occasional context from the hosts. However, there isn’t much support when an emoji doesn’t work, either when the context is missing or it just shows up as the dreaded “image.”
“IMAGE NOT FOUND”

That’s where things get even murkier: remember Chevy’s emoji press release at the beginning of our post? If you examine the press release page’s source code, the entire press release is just a picture of a string of emoji’s, without any alt text. If a screen reader attempted to interpret it, a blind user would likely just hear one word, “image.” No context, no further information. An entire marketing campaign now unreachable to them.

Dove also recently introduced “curly hair” emoji, yet when the iPhone deciphers them in VoiceOver mode, the emoji is again read as “image,” with no description of what appears on the screen. And Dove and Chevy aren’t the only ones – KitKat is even petitioning to get the word “break” recognized as an official emoji of two KitKat bars snapping in half. But if the Unicode description for the emoji is “break,” a blind user has no context for the emoji. Break what? Why? They have no way of knowing the greater social relevance or its evolving significance – that the emoji is actually of a KitKat bar – if it can’t be properly interpreted by a screen reader.

WHY IT MATTERS

At Siteimprove, creating an accessible web for all is one of our most important values. It’s not only an ethical, but, in many countries, a legal responsibility. Higher education institutions in the U.S. have faced off with the Department of Justice just this past year due to lack of accessibility on their websites. The State of California recently audited their government websites for accessibility compliance and discovered that the state’s official marketplace for healthcare coverage was completely unusable by people with disabilities who relied on their keyboards to navigate the site. In Canada, the clock is ticking down on the Accessibility for Ontarians with Disabilities Act (AODA) requiring all provincial websites to be fully accessible.

Emoji’s may seem less pressing in comparison, but for a user with disabilities, they can be another reminder of a web not built for them. As mentioned above, technology has come a long way, and many screen readers can interpret emoji’s to some degree. Yet it isn’t always a guarantee, and what can seem like a creative marketing approach can end up excluding an entire audience. A smiley face isn’t just a picture of a smiley face anymore – it conveys a mood, a pun, or now, even social references. Odds are high that an emoji holiday campaign could be a fun approach to an endless season of shopping and sales, or spark a quick laugh.

But 39 million people may not be in on the joke.

ACHIEVE WEB ACCESSIBILITY WITH WEB GOVERNANCE

Web accessibility isn’t something that is ensured solely through a website development project. To be successful, accessibility has to be a part of the overall web governance strategy.

Websites have become so large and complex that being concerned with the strategies, goals and standards you have for your website is an entire career. Here at Siteimprove for example, we have separate advisers and tools for handling servers, search engines solutions, web analysis, web accessibility, and SEO. Large websites and portals are an integration of many different systems that often come from different parties. Handling and controlling the website therefore becomes a complex unit to work with and there are too many cooks in the kitchen.
WHY YOU SHOULD INCLUDE ACCESSIBILITY IN YOUR WEB STRATEGY

Online self-service is by far the most affordable way to service your users/customers. Contact by phone or in person requires dedicated staff time, and detracts from your other initiatives. The importance of accessibility is that it helps ensure as many users as possible can use your website, including the online self-services. Having a website that is accessible to 90% of users rather than just 70% of users can make a big difference on your bottom line.

Accessibility is often a neglected part of making a website strategy. The project manager usually has too much on their plate, and accessibility slips through the cracks. It isn’t neglected as a result of not caring or a lack of interest, but rather because there is too much trust put in the website vendors. The tendency is to assume that they know what to do, and that adding accessibility to your requirements specification means it will be taken care of. Unfortunately, this is far from the case.

Another problem is that many web managers do not know enough about accessibility to know that ensuring good web accessibility is a process, rather than just a coding task during development.

We have been involved in many web projects where an executive in the organizations says: “Our website must meet WCAG, the web accessibility guidelines on all conformance levels,” but they have no idea what this entails. Accessibility isn’t something that can be simply added into the current web project and the new website budget. For example, if you want to add a video to your website and want it conform to the guidelines on level AA (which is mandatory for many public websites) it requires a number of things for video content. You must provide captions, audio description and a number of other things. If you wish to conform on level AAA, you must also provide sign language of the content. Do you have the resources for this every time you upload a video to the website?

Accessibility is relevant as an on-going process during the lifetime of the website. Every time you integrate a third party solution or you upload video or audio content and similar situations. The publishing process of web editors and the CMS that the website is based on also has influence on the ability and the situation of whether the publishing practice supports accessibility or whether it introduces new accessibility issues.

It’s a good idea to have a separate strategy for ambitions on accessibility and what strategy to have in order to ensure it. It is also important to integrate the number of accessibility criteria relevant in the organization’s communications policy, design guide, policy for purchase and the likes. Create a matrix of the stakeholders in the process.

WEB GOVERNANCE TIPS FOR ACCESSIBILITY

It’s a good idea to divide accessibility into a set of areas of responsibility and subsidiary goals:

- Who will ensure that the right requirements are made at the right time with the vendors?
- Who will ensure that accessibility is integrated in the different policies for the organization? (Communications policy, design guide, policy for purchase and the likes).
- Who takes responsibilities for accessibility during design and development?
- How do we ensure that the requirements are met? Remember the CMS, video and audio players, forms and all the technical tools that are connected to and integrated with the website.
- Who ensures that web editors and authors of documents are trained to follow accessible publishing practices?
- Who ensures that there is an on-going process of checking if the guidelines are met and that no new accessibility issues are introduced on the website?

It’s important to have established the division of ownership and responsibilities on all the different areas, and you should have an accessibility coordinator. This person is consulted when new decisions are made for the website. This could be re-structuring, new purchases and integration, change of existing policies and the likes. And this person has a written network of contacts inside and outside the organization. People that in some way can affect the website and its content.
OVERWHELMED?
DON’T WORRY!

You can easily automate these best practices of web accessibility. With Siteimprove’s Accessibility module, you can jumpstart your website’s accessibility, no experience required! Prioritize and manage your web team’s accessibility compliance. Check WCAG 2.0, levels A, AA, and AAA errors, and reference issues alongside detailed fix explanations.

Get a free demo using Siteimprove’s Accessibility tool to see how accessible your website currently is!

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