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# Accessible Web Design

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# FAQs: Title II Entity Web Accessibility Obligations and Recommendations

## Q. Does the ADA require Title II entities to have accessible websites?

Yes. Title II entities are required to provide equal access to their programs, services and activities and effective communication. Websites are both a means of communicating information to constituents and a service of the Title II entity. Websites and other digital technologies have expanded greatly since the passage of the ADA in 1990. Regardless of the technology used, however, the requirement to provide access to services and effective communication remains the same.

## Q. What is the criteria to determine if our website is accessible? Is there a web accessibility standard that we should use?

The US Department of Justice is currently in the process of developing web accessibility guidelines for Title II entities to be incorporated into the ADA Title II regulations. These guidelines, from all appearances, will be based primarily on the Web Content Accessibility Guidelines v2 (WCAGv2), developed by the Worldwide Web Consortium (WC3). The scheduled release for these guidelines has been delayed several times. Recently, (May 2016) the Department again delayed releasing web accessibility guidelines for Title II entities. Instead, the DOJ issued a Supplemental Advance Notice of Proposed Rulemaking (SANPRM) requesting public comment until August 8th on several items. (123 questions were open for comment). An excellent [summary](#) of the SANPRM, can be found on Seyfarth Shaw LLP's ADA Title III News & Insights Blog.

So what should Title II entities currently do in regard to their websites? The response is based on three things that are evident right now.

- 1) The Department of Justice has clearly indicated that Title II entities have an obligation to make their websites accessible and, when not possible, provide equivalent facilitation of the content.
- 2) Although the Dept. of Justice has delayed the release of its Title II web accessibility guidelines, indefinitely; there **will** be web accessibility guidelines specifically for Title II entities at some point. There will also be a given timeline for state and local governments to meet these new guidelines.
- 3) All indications from DOJ proposed rules that have been released for comment

point to Title II web accessibility guidelines based on WCAG v2 Level AA. There is a possibility of some exceptions that will only require meeting Level A.

Title II entities are advised to **not delay** steps to make their websites accessible until the new guidelines are released. Delay could result in having to update large amounts of content in a relatively short time period. Failure to take steps to provide accessible content also means that people with disabilities do not have the same access to information or interactive features such as online bill paying systems as other citizens.

A better course of action is to develop a plan to address website accessibility and to follow the WCAG v2 Level AA as closely as possible to achieve accessibility, especially for all new content. Title II entities that commit to developing accessible content for their websites using the information and resources presently available will better meet the needs of their citizens with disabilities as well as other users. These entities will also be meeting their ADA compliance obligation to the fullest extent possible and will be prepared to meet the new requirements in the appropriate time frame when they are released.

## Q. Our city has a website with numerous pages and documents. How should we start to make it accessible? The process could take a long time.

Start with identifying the key pages used by consumers and make these pages your first priority. Criteria for identifying priority webpages includes:

- The most frequently visited pages on the website.
- Pages that contain critical information regarding health and safety, such as locations of emergency shelters or how to contact animal control.
- Pages that residents must use to conduct business with a city such as paying bills.
- Pages that present frequently updated content such as trash pickup schedules, and calendars of upcoming events.

- Pages that contain information related to civic involvement. For example, information about city council meetings, committee meetings and voting locations, should be accessible to all constituents.
- It is highly recommended that Title II entities seek input from the disability community at the beginning of this process, asking them for their recommendations as well. This could be done through a committee, general survey, or working with an organization that represents people with disabilities such as an Independent Living Center.

**Q. We have web pages that aren't fully accessible and are currently having them updated. Are we still out of compliance with the ADA? What should we do in the meantime?**

Title II entities have an obligation to make programs, services and activities accessible to people with disabilities. However, alternatives to web access can be provided to meet this obligation. For instance, if an online bill paying feature is not accessible to blind users, make sure they can pay their bills via telephone. Make sure these users have a way to know this option is available.

Providing alternatives to web access should not be a permanent solution to website compliance. Every effort should be made to make priority content accessible to all users. In the interim, let the public know that you are in the process of improving accessibility and provide contact information for users to request the inaccessible content either by phone, email or postal mail, depending on the user's preference. Make sure these requests are responded to in a timely manner!

**Q. Our city uses a content management system for our website. Are we responsible for accessibility compliance or the company that developed the system?**

Content management systems (CMS) have become increasingly popular and common. Primarily, because they allow staff members to add and remove content from a website without using HTML, CSS, or other coding languages. These systems, however, do not allow much flexibility once they are designed. For instance, if a content managed system does not provide a way for staff to add an alternative description or "alt tag" to an image, the image will not be accessible to screen readers.

Title II entities are responsible for web compliance, regardless of whether they are

using CMS, their own web designer, or have outsourced tasks to a web design company. That is why it is critical that Title II entities make sure the content management systems they purchase offer full accessibility features and the company agrees that accessibility issues will be solved should problems arise **before** purchasing a particular system.

**Q. Our county has a number of documents and files that can be downloaded from our website. This includes numerous portable document files (PDFs) and Word documents. Are we required to ensure all of these documents are accessible? Should we take them down if they are not accessible?**

You have described a fairly common dilemma. It is not the ADA's intent to make less content readily available to the public, so removing content is not required or recommended. However, to recreate numerous documents is a daunting task and one that might cause an undue financial and/or administrative burden.

**What is the alternative? The following steps are one recommendation.**

1. Review your overall accessibility plan and the key pages/information you have identified as a priority. Ensure that priority documents are accessible or the content is also available in another format such as HTML, Rich Text Format (RTF) or Plain Text Format (TXT). For example, if a city posts a map showing bus stop changes due to construction as a PDF. The PDF should be accessible or a text document listing the changes in the bus stop locations and schedules should be provided as well.
2. Develop a policy for new documents. Providing an HTML or text-based format for PDFs, power-points or other types of documents is recommended. The document is not only accessible to screen reader users, but also to users who may not have software needed to open different types of documents. Text and HTML formats also provide an alternative that mobile and tablet users may choose to use.
3. For the remainder of documents, make sure users know how to request information if they cannot access it online. This will allow you to provide different formats (or update existing formats) as needed. Of course, make sure requests are responded to promptly and the means to make a request is accessible. (Imagine having to use an inaccessible form to request inaccessible content. It happens!)

# Developing an Action Plan For Providing Accessible Websites

## A well-designed action plan would include the following steps:

1. Establish, implement, and post online a policy that your website will be accessible and create a process for implementation.
2. Ensure that all new and modified website pages and content are accessible.
3. Check the HTML of all new content. Make sure that accessible coding is used.
  - Make sure that websites are designed so they can be displayed using the color and font settings of each visitor's browser and operating system.
  - If images are used, including photos, graphics, scanned images, or image maps, make sure to include a text equivalent, by adding "alt" tags or long descriptions, for each.
  - If you use online forms and tables, make those elements accessible by labeling each control (including buttons, check boxes, drop-down menus, and text fields) with a descriptive HTML tag.
  - When posting documents on the website, always provide them in HTML or a text-based format (even if you are also providing them in another format, such as PDF).

Develop a plan for making your existing web content accessible. Describe your plan on an accessible webpage, and encourage input on how accessibility can be improved. Let visitors to your website know about the standards or guidelines that you are using to make your website accessible. When setting timeframes for accessibility modifications to your website, make more popular webpages a priority.

When updating webpages, remember to ensure that updates are accessible. For example, when images change, the text equivalents in "alt" tags and long descriptions need to be changed so they match the new images.

Ensure that in-house staff and contractors responsible for webpage and content development are properly trained. Distribute the Department of Justice technical assistance document "Accessibility of State and Local Government Websites to People with Disabilities" to these in-house staff and contractors on an annual basis as a reminder. This technical assistance document is available on the ADA Home Page at [www.ada.gov](http://www.ada.gov).

Provide a way for visitors to request accessible information or services by posting a telephone number or email address on your home page. Establish procedures that ensure a quick response to users with disabilities who are trying to obtain information or services in this way.

Periodically enlist disability groups to test your pages for ease of use; use the feedback they provide to increase the accessibility of your website.

Ensure that there are alternative ways for people with disabilities to access the information and services that are provided on your website. Remember, some people may not have, or be able to use, a computer.

*From ADA Best Practices Tool Kit for State and Local Governments:  
Chapter 5 Website Accessibility Under Title II of the ADA.*



[www.webaim.org](http://www.webaim.org)

The webaim website has numerous how-to's and tutorials in user-friendly language. A good starting place to learn about web access.

# Web Content Accessibility Guidelines (WCAG v2)

Web Content Accessibility Guidelines (WCAG v2) are technical standards that can be followed to make web content more accessible to people with disabilities.

These standards were developed by the Worldwide Web Consortium (W3C) for the benefit of page authors, site designers and web content developers as well as designers of web authoring tools. The Standards also provide set criteria that can be used to determine if businesses, educational institutions, and local governments have met their accessibility compliance obligations for web/digital content.

WCAG is based on four principles that apply to web content access. (Described on the following page.) Anyone who uses the web must be able to perceive, operate, and understand the content as well as be able to access the website with some type of technology (browser, mobile device, etc.) People with disabilities have the same needs but may also require that certain barriers be removed, either through appropriate coding of markup language such as HTML or through the use of good design techniques. The guidelines that make up WCAG v2 (1.11 through 4.1.2) address accessibility issues in each of four areas enhancing access for people with a wide range of disabilities. For example, a person with motor limitations who relies on keystrokes rather than a mouse to navigate a website may experience operable barriers, while a blind person will have perceivable barriers. Designers who follow WCAG v2 will meet the needs of both users.

A - Priority 1 checkpoints (Must)

AA - Priority 1 and 2 checkpoints (Should)

AAA - Priority 1, 2, and 3 checkpoints (May)

Trend: Settlement agreements require Level AA minimum

## What Does WCAG v2 Level A, AA, AAA Mean?

The standards or “checkpoints” that make up WCAG are divided into three categories by priority. When a website meets all of the priority 1 checkpoints, it can be classified as meeting WCAGv2 Level A. To receive a Level AA rating, a website must meet all of both priority 1 and 2 checkpoints. All checkpoints, priority 1, 2 and 3, must be met for the WCAG v2 Level AAA classification.

The priorities help website providers identify the accessibility guidelines that are **absolutely** necessary for many users with disabilities to access websites (Priority 1) and then move forward to provide greater accessibility for users (Priority 2 and 3). These priorities also help ensure a logical order to meeting accessibility guidelines. A website that offers advanced accessibility features (Priority 3) but misses critical Priority 1 guidelines is not really accessible despite some of the higher priority features. In other words, avoid a hodge-podge approach to meeting WCAG v2.

## WCAG Resources

**Quick Reference Guide to Web Content Accessibility Guidelines (WCAG) Requirements and Techniques.**

<https://www.w3.org/WAI/WCAG20/quickref/>

**WebAIM's WCAG 2.0 Checklist** [webaim.org/standards/wcag/checklist](http://webaim.org/standards/wcag/checklist)

# POUR

Web Content Accessibility Guidelines (WCAG v2) are Based on Four Principles of Web Accessibility.

## Perceivable

**Users must be able to perceive the information being presented using the sense they rely on.** Example: Blind users should be able to use software that “reads” content and deaf users should have access to captioned audio content.

- Provide text alternatives for non-text content.
- Provide captions and other alternatives for multimedia.
- Create content that can be presented in different ways, including by assistive technologies, without losing meaning.
- Make it easier for users to see and hear content.

## Operable

**Users must be able to operate the interface.** Actions that users can't perform such as clicking a mouse shouldn't be the only way a user can navigate or

- Make all functionality available from a keyboard.
- Give users enough time to read and use content.
- Do not use content that causes seizures.
- Help users navigate and find content.

## Understandable

**Information and the operation of user interface must be understandable.** Users must also be able to easily understand how to operate the site and access the content.

- Make text readable and understandable.
- Make content appear and operate in predictable ways.
- Help users avoid and correct mistakes.

## Robust

Websites should be usable by a variety of browsers and technologies, including assistive technologies. Content should remain accessible as technology advances and not require use of only one type or version of browser.

- Maximize compatibility with current and future user tools.

# Good Design = Accessible Design = Universal Design

Web designers don't have to choose between good design and accessibility when developing web or digital content. In fact, common practices that designers have used for years to create user friendly and attractive layouts are often the same techniques that make content more accessible to people with disabilities. Being cognizant of how the use of graphics, color, layout and fonts affect users with certain types of disabilities results in design that is also more accessible to everyone, especially seniors who share many of the same needs. Following are examples of design that are universal in accessibility, appeal and user-friendliness.

Sample template from a web design company.



The photograph is colorful, inviting, and conveys meaning. Visitors would probably assume the site was for a cleaning service before reading any content.

Because there is plenty of space between navigation links (both text and image) users with limited physical dexterity can easily select the desired link.

Note the use of both icons and words to show navigation to different content.



The simplicity of this site makes it easy for **all** users to navigate.

The page has several different elements including 20 different links to other pages but it doesn't look crowded. This is due, in part, to plenty of white space between elements and the use of only three colors.

The designer keeps the site interesting by using bright fresh colors, a great photo, and icons. This webpage is a good example of how clean, modern design can benefit all users.

**Suggestions:** Perhaps make the type a little larger and use more contrast between dark text and the background.

# Use Consistent Design Elements Throughout a Website

Web page design consists of the page layout, graphic designs, and use of color and symbols. Keeping these elements consistent from page to page helps users find information and navigate through the site with ease. Why? The brain recognizes and responds to patterns or themes very quickly. You have probably visited a new website and in a manner of seconds could locate the navigation bar, find links in the content, and move easily through different pages within the site. This was due to good design. The site had a consistent look and feel that allowed you, as a user, to quickly “figure it out”.

You have probably also experienced the frustration of a website that was difficult to navigate, with every page seeming like a new one as you hunted for the navigation bar or the “back to home” link. That frustrating experience was due, most likely, to lack of design consistency.

For example, the graphic on this page shows a number of templates that designers could use for interactive buttons. Whatever the choice, the designer should use the same graphics for interactive buttons consistently on the page and throughout the site. Imagine how confusing it would be if all of the buttons featured on the graphic below were used on one site!

## The same principle applies to layout.

Over time, designers started to use established locations for content and other features allowing users to visit different websites across the Internet and intuitively know how to navigate each site. Gerry Gaffney (*Why Consistency is Critical*, [sitepoint.com](http://sitepoint.com)) explains the importance of consistent layout for all users. “People have a strong memory for location, and your designs can leverage this characteristic by reserving particular locations for screen elements (navigation,

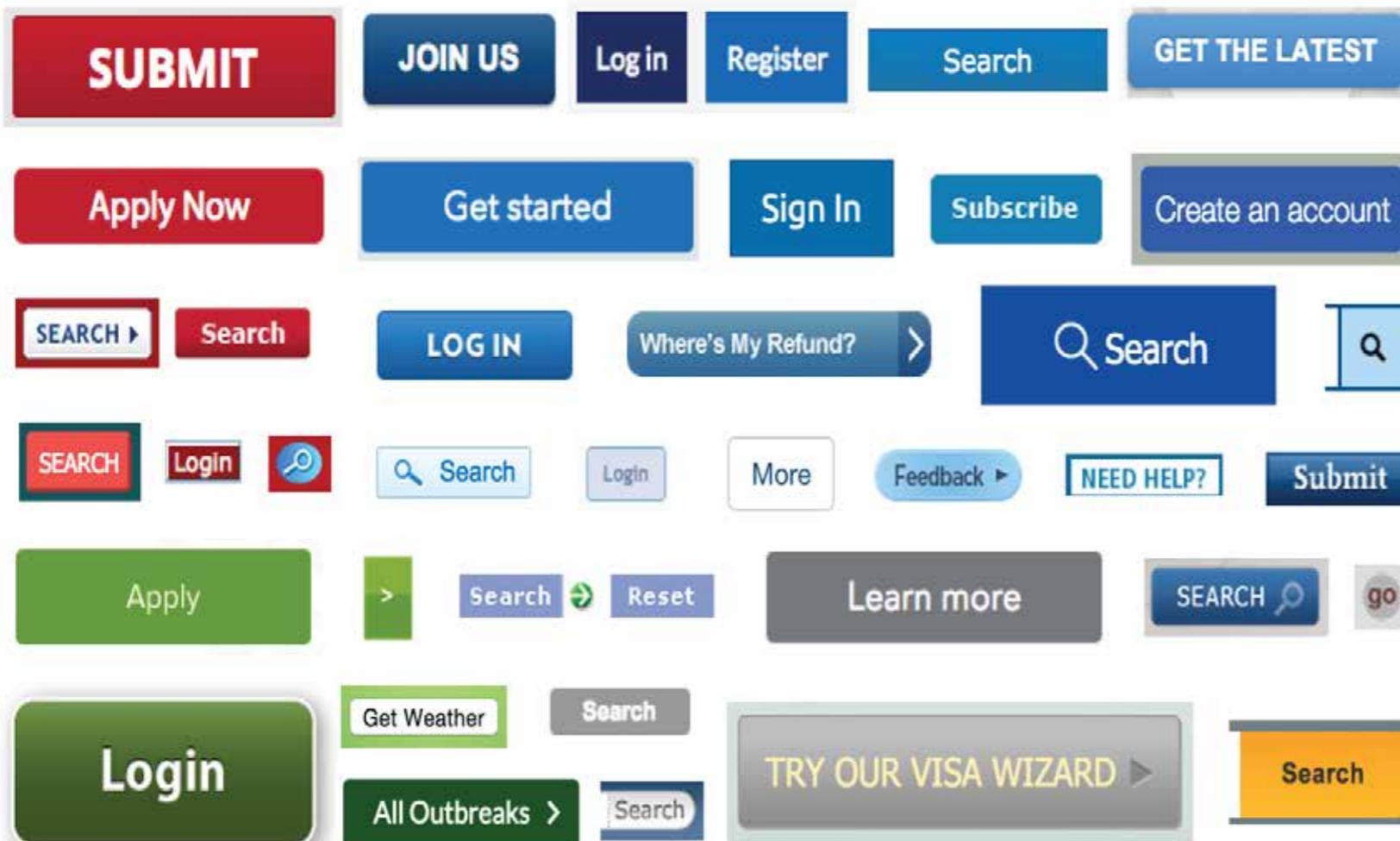
search, login, content) and applying them consistently. In usability tests, we’ve seen users become totally lost by navigational elements that appear to be the same, but have actually changed — the users simply don’t register the change and can’t find the content or features they want.”

## He suggests designers follow these practices.

- Navigation on the top or left (or both).
- Breadcrumbs (if used) below the primary navigation.
- Content in the center of the page.
- Related material and promotions on the right.
- Search on the top right (although there are many exceptions to this).
- When choosing layout options for your site, spend an hour touring similar sites and get a feel for the general practice.
- Move away from this general practice only if you have solid reasons for doing so.

A quick web search will lead to many articles on the importance of consistency when designing websites. This practice, without a doubt, results in websites that are more usable for the general population and far more accessible to people with visual perceptual disorders, certain learning disabilities and cognitive disabilities.

**Take Away:** Inconsistent design features that may make a website frustrating to navigate for one user, can make the site impossible to access for an individual with a disability.



# Contrast Between Text and Background

Low contrast between the text and background can make content very difficult to read for many users.

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People with visual/perceptual disorders or aging eyesight benefit greatly from adequate contrast between backgrounds and text. Contrast may be light text on a dark background or dark text on a light background.

Most people, even when able to read the low contrast example, prefer high contrast between text and background, finding it easier to read and better for eye strain.

## Font Type

*When there are several lines of text, font choice can greatly effect readability.*

*Especially when the text is smaller.*

When there are several lines of text, font choice can greatly effect readability.

Especially when the text is smaller.

When there are several lines of text, font choice can greatly effect readability.

Especially when the text is smaller.

Use fonts such as this brush script font very sparingly, if at all. Never use this type of font for passages of text or important headers. These fonts are too difficult to read for a number of users.

Sans-serif fonts, such as Arial are good choices for screens. Sans-serif means that the font is smooth and does not have little points or serifs at the top or bottom of the letter. They should definitely be used for longer passages of text, such as articles, that appear on the screen. **Arial, Verdana and Tahoma are good choices** for their accessible and universal design properties.

Times New Roman is a very common serif font. As shown in the example, each letter has a small addition or serif. Serif fonts can be good choices for larger headers and titles. They are not recommended, however, for longer passages or smaller type.

## Line Height

The space between the lines (line-height) can be as important as the size of the font.

The space between the lines (line-height) can be as important as the size of the font.

The majority of users will find the smaller font with more space between the lines to be easier to read than the larger font. Both font size and line-height are important to overall readability.

# Formatting Text

Headings, subheadings, bullets, margins, paragraphs and columns are all formatting techniques commonly used in print media to make content both easier to read and comprehend. These techniques have the same impact in digital media. Making content understandable is one of the principles of the Web Content Accessibility Guidelines (WCAG) and text formatting, although relatively simple, has a significant impact on the users's ability to read and understand information. Good text formatting allows readers to quickly scan information, recognize main points, and associate content with main headings. Text formatting is particularly helpful to individuals with reading and other learning disabilities.

A quick scan of the two columns below, both containing the same content, shows how much our ability to easily read, comprehend and remember information can be improved by good formatting techniques.

## Organize and prioritize the contents of a page by using size, prominence and content relationships.

Let's look at these relationships more closely:

- **Size.** The more important a headline is, the larger its font size should be. Big bold headlines help to grab users' attention as they scan the web page.
- **Prominence.** The more important the headline or content, the more prominent its place on the page. Important or popular content is generally positioned prominently near the top of the page so users can view it without having to scroll too far.
- **Content Relationships.** Group similar content in a similar visual style, or in a clearly defined area.

Organize and prioritize the contents of a page by using size, prominence and content relationships. Let's look at these relationships more closely. The more important a headline is, the larger its font size should be. Big bold headlines help to grab users' attention as they scan the web page. The more important the headline or content, the higher up the page it should be placed. The most important or popular content should always be positioned prominently near the top of the page so users can view it without having to scroll too far. Group similar content in a similar visual style, or in a clearly defined area.

## More Recommendations for Fonts

ALL CAPS are difficult to read. Don't over rely on them for emphasis or graphic effect. A word in a sentence for emphasis or an occasional heading should suffice.

"Just say No" to blinking, animated, and rolling text.

Limit the use of different fonts on a web page or even throughout a website. One font for main text and another for headings is generally all that is needed.

Boldface should be used to make a word or phrase stand out in the text. Putting all of the text in boldface defeats its purpose and makes both reading and understanding content more difficult.

Avoid the use of techniques that change the fonts original appearance such as stretching, scrunching, or widening. These techniques can be effective as part of a graphic, but should not be used in the main text to convey information.

**Stretching**

Scrunching

**Widening**

Lengthening

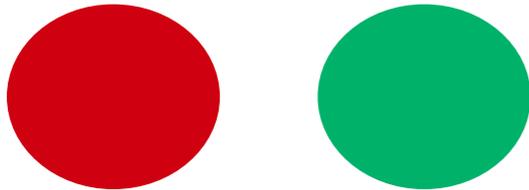
# COLOR

Approximately one in twelve men (8%) and one in 200 women (.5%) have some form of color blindness (colourblindnessawareness.org). The majority of people who are color blind, have difficulty seeing red and green to varying degrees.

How does this affect web design?

Color can be used to let the user distinguish between objects as shown in the example below.

Select the red button to reset your form and the green button to submit.



This would pose a real difficulty for a color blind user. However, with the simple addition of a label both color and text convey information to the user.



Here is an example where the color red is used to indicate links.

The article ["Tornado Safety"](#) provides useful tips.

Here is what a color blind person would see.

The article "Tornado Safety" provides useful tips.

Now link is indicated by both color and an underline.

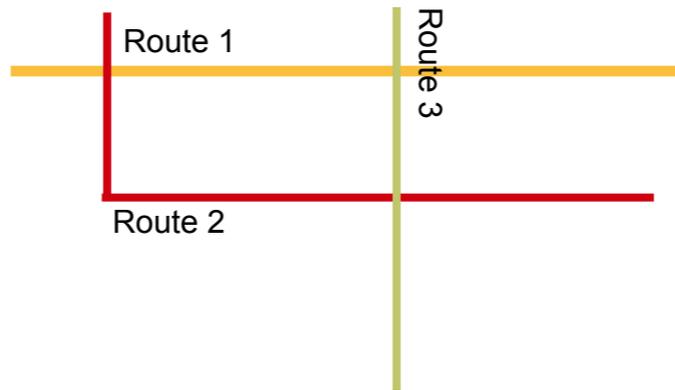
The article ["Tornado Safety"](#) provides useful tips.

The color blind user now knows there is a link to the article.

The article ["Tornado Safety"](#) provides useful tips.

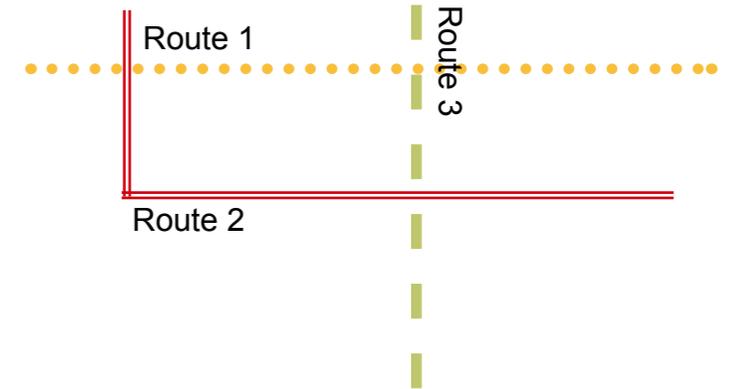
# COLOR

Maps can also be difficult for color blind users. For instance, the map of bus routes below uses color to indicate different routes.



**Note:** Pointing out how use of color can affect people with color blindness is NOT a recommendation to forgo color. Color makes content more interesting and consistent use of color helps many users to more easily navigate sites and find information. But color should not be the only way information is conveyed. Following the advice from usability.gov will ensure appropriate use of color and more usable websites.

Note how using both color and different line styles makes the routes more distinct for everyone.



"Each element should have more than one cue. Images, links, buttons, and other similar elements should be enhanced with an image, shape, positioning or text. For example, a link should be highlighted by color as well as underlined. Take away the color treatment and the underline will let visitors with color blindness know that it is a link."

-usability.gov

## Resources:

**Color Blindness and Web Design-Jeanne Liu Usability.gov**

<http://www.usability.gov/get-involved/blog/2010/02/color-blindness.html>

**Visual Disabilities-Color Blindness, WebAim.org**

<http://webaim.org/articles/visual/colorblind>

# Screen Readers

A quick guide to websites and screen readers.

A website is a highly visual medium for the majority of content. How then, do people who are blind or have low vision access web page content? Technology. Websites become an “auditory” rather than a visual medium through the use of assistive software referred to as screen readers.

**How does this work?** All websites are essentially code (usually Hypertext Mark Up Language or HTML) that formats text, graphics, and other elements onto the webpage. Browsers such as Google Chrome or Internet Explorer “decodes” the HTML to display the page.

For instance: `<font =”Arial” size=”large” color=”#ecec”>I am going to the store</font>`  
Would look this on the webpage: I am going to the store. The software would read the code as “I am going to the store” to the screen reader user.

Now let’s make a slight change in the code: `<font =”Arial” size=”large” color=”white”>I am going to the store</font>` The sentence, “I am going to the store” would not show up on this white background because the chosen font color is white, but a screen reader would still read the sentence that appears in the code.

The appearance of content and images on the computer screen is not relevant to the screen reader. What matters is if the code is formatted in a way that the screen reader can decode or “read”. Web designers must have an understanding of how screen readers work in order to code in a way that the software can navigate. **Here are some basics:**

## Images

Screen readers can only read text and, obviously, can’t see and describe an image. However, designers can use alt attributes to provide information about an image.



**This is the HTML code.**

```
<img src=”flower.jpg” alt=Large chrysanthemum in bloom”>
```

The browser displays the photo to the left.

The screenreader will read the description of the photo provided in the “alt tag”. “Large chrysanthemum in bloom.”

Images are required to have a text equivalent in both WCAG v2 and Section 508 Accessibility Guidelines. The alt attribute or “alt tag” is the most common and usually most effective way to provide that text equivalent. However, sometimes providing the content in the text near the image can also be used.



Golden retrievers are one of the most popular family pets as shown in this photo of a golden retriever playing with children.

In the photo above, the caption provided for all users provides a text equivalent. In this case, the alt attribute can be null to indicate to the screen reader to simply bypass the photo and move on to the text. `<img src=”dog.jpg” alt=””>`

Designating the alt attribute as null also makes sense when an image is used purely for decorative purposes.

### How should images be described in the alt attribute?

Describing the image in terms of how it contributes to the context of the text is more beneficial to the person using a screenreader than just a description of the image. If this image appeared in an article about children’s health, which would be the better description?



#### Description One:

Image of 8-month old baby with brown hair and blue eyes crying and pulling on her ear.

#### Description Two:

Infants with ear infections may pull on their ears and cry as shown in this image of a baby crying and pulling on her ear.

The second description should be the clear choice. The child’s hair and eye color have nothing to do with the context of the article or why the author chose to include that photo.

A good article on alternative text for images is available from WebAim at <http://webaim.org/techniques/alttext>

**Note:** All images should have an alt attribute with either a description or a null symbol.

# Structural Markup

Structural markup is another way to convey the same meaning as visual formatting. Formatting such as bold face, underlines, indentation, etc. is used to help the reader easily move through and understand the content. Readers can more easily find specific information when effective formatting techniques are used. This entire article, for instance, uses headings and subheadings to organize the information. If you wanted to scan through the headings quickly to find a specific section, you could do so.

In this article, headings and subheadings are formatted like this.

**Screen Readers**  
**Images**

*Example:*

Headings would be “marked” like this for blind users.

```
<h1>screen readers</h1>
```

```
<h2>images</h2>
```

```
<h3>example</h3>
```

Markup can be used to convey other types of text formatting, as shown below.

```
<strong>defines text that is important and boldfaced</strong>
```

```
<abbr> Defines an abbreviation or acronym</abbr>
```

```
<address>Defines contact information for the author/owner of a document</address>
```

```
<blockquote>Defines a section that is quoted from another source</blockquote>
```

```
<em>Defines italicized text</em>
```

```
<cite>Defines a citation in the text</cite>
```

Using the appropriate HTML tags provides the screen reader user with the same information that others get through text formatting.

## Web Page Orientation

Most web pages consist of different sections or elements such as a top banner or header, navigation items, main content or article, and a sidebar with other types of information as shown in the next column.

A sighted user can quickly (if the page is designed well) find these different elements. But screen reader software has to have “landmarks” to let the user find these sections. Designers who use **ARIA landmarks**, HTML section elements such as `<main>` `<nav>` and `<header>` in their coding make it much easier for screen reader users to find what they want on a page without having to go through the every item.

**Skip links** are another technique designers use to allow users to jump past sections by simply clicking a link. Skip links are often used to jump past navigation.

## Order of Content

Related to the page orientation is the order in which the content is read by the user. Screen readers move through the code from left to right. That shouldn’t pose a problem, right? Not necessarily. Sometimes information appears in a different order in the source code than it appears on the screen. This can cause the screen reading software to “read” content in an order that is confusing and/or impossible to understand. For example, screen readers will “read” information placed in table cells from left to right. Here are two examples of a webpage where tables were used to create a calendar. The numbers show how the screen reader will read through the table cells.

| 2016 Calendar     |                |                     |                    |
|-------------------|----------------|---------------------|--------------------|
| <b>1</b> January  | <b>2</b> April | <b>3</b> July       | <b>4</b> October   |
| <b>5</b> February | <b>6</b> May   | <b>7</b> August     | <b>8</b> November  |
| <b>9</b> March    | <b>10</b> June | <b>11</b> September | <b>12</b> December |

Users who are able to see the page will immediately note that the months of the year are in vertical order. A blind individual would have no way to make these inferences and instead rely on the screen reading software to present the information in the wrong content order. The second calendar, still based on a table format, corrects this problem with some minor changes in the table layout.

| 2016 Calendar      |                   |                    |                    |
|--------------------|-------------------|--------------------|--------------------|
| <b>1</b> January   | <b>2</b> February | <b>3</b> March     | <b>4</b> April     |
| <b>5</b> May       | <b>6</b> June     | <b>7</b> July      | <b>8</b> August    |
| <b>9</b> September | <b>10</b> October | <b>11</b> November | <b>12</b> December |

**Note:** Whether using tables, cascading style sheets (css) or some other form of mark-up, the designer needs to make sure the content is read in the intended order by the screen reader.

## Interactive Elements

It wasn't that long ago that most people used websites only for information. Now, it is common for people to use websites and mobile devices to shop, reserve tickets, pay bills, do their banking, and numerous other tasks. These activities require specific coding techniques.

Security features such as Captcha pose a particular challenge for screen readers as the purpose of these features is to use graphics that people can see but software can't identify. Alternative methods that let users hear a word and retype it provide the same level of security and should be available for blind and low vision users (or anyone that wants to use it.)

## Making Sure Your Websites are Accessible to Screen Readers

This article has only skimmed the surface of creating accessible pages for people who use screen readers. However, it should be clear that screen reader users can get the same information from webpages as sighted users, **if** the pages are coded correctly. Making web pages accessible to screen reading software requires some technical knowledge and a familiarity with how screen readers navigate and "read" pages. This can be accomplished with minimal training/information.

Validation tools are extremely helpful in checking coding on new pages before being posted and/or identifying possible compliance errors in existing webpages. WAVE is a very user-friendly validity tool that is offered by WebAim and available on the organization's website. ([www.webaim.org](http://www.webaim.org))

## Why a Transcript is not enough to Make Your Videos Compliant with Accessibility Law.

If you want to make your online videos accessible to people with disabilities, you'll need more than just a video transcript. Transcripts are adequate to make audio content accessible to deaf or hard-of-hearing users, but videos need closed captions and video description to be fully accessible to everyone.

### Closed Captions

Closed captions are a textual representation of the sounds on a video, timed with the action on screen. They capture not just the speech but also essential sounds, like [doorbell], [laughter], [applause], etc.

Closed captions appear on the bottom (or top) of the screen as the video plays. This allows the viewer to read the text and absorb the visuals at the same time.

"Ultimately, a video transcript does not offer an equivalence experience for deaf or hard-of-hearing viewers."

Without closed captions, a deaf viewer would have to switch back and forth between watching a video and reading a transcript.

This is a very distracting, disjointed experience. They can easily lose their place, miss key elements on screen, get out-of-sync with the video — ultimately, a video transcript does not offer an equivalence experience for deaf or hard-of-hearing viewers.

**The ADA requires that an equivalent alternative be provided for people with disabilities. Providing just a video transcript would fall short of effective accommodation.**

Federal disability law Section 508 will soon require that online video comply with WCAG 2.0 Level AA standards for accessibility. WCAG 2.0 Level A, the lowest form of compliance, requires closed captions for all pre-recorded video. In short, closed captions are necessary for your video to comply with the ADA and Section 508.

### Video Description

Important visual elements of videos must be communicated to blind or low-vision users in order to be fully compliant with accessibility law. A video description communicates all necessary visual information, such as who is in screen, where they are, what they are doing, their facial expressions, and any writing that is on the screen.

Video descriptions can be in the form of a screen reader accessible text document or an audio recording. The former is preferred for deaf-blind users, since it can be turned into braille.

The take-away: video description is required to make videos fully accessible to blind users according to WCAG 2.0 Level A standards.

### The Letter of the Law

For your reference, here is the exact wording of the rules on making web video accessible.

#### Section 508 Video Accessibility Rules

§ 1194.22 Web-based intranet and internet information and applications.

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

#### WCAG 2.0 Level A Requirements for Video

1.2.1 Audio-only and Video-only (Pre-recorded): For pre-recorded audio-only and pre-recorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such:

**Pre-recorded Audio-only:** An alternative for time-based media is provided that presents equivalent information for pre-recorded audio-only content.

**Prerecorded Video-only:** Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.

**Note:** This WCAG 2.0 accessibility standard applies not just to video but also to other “synchronized media” with audio, such as a PowerPoint recording or SlideShare presentation.

**1.2.2 Captions (Prerecorded):** Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such.

**1.2.3 Audio Description or Media Alternative (Prerecorded):** An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such.

This article by Emily Giffen appeared in [www.3playmedia.com](http://www.3playmedia.com), February 2106.

To access the original article and a video highlight on captioning visit:

<http://www.3playmedia.com/2016/02/01/why-a-transcript-is-not-enough-to-make-your-video-compliant-with-accessibility-law/>

## Videos and Other Multimedia Content

### **Problem: Videos and Other Multimedia Lack Accessible Features**

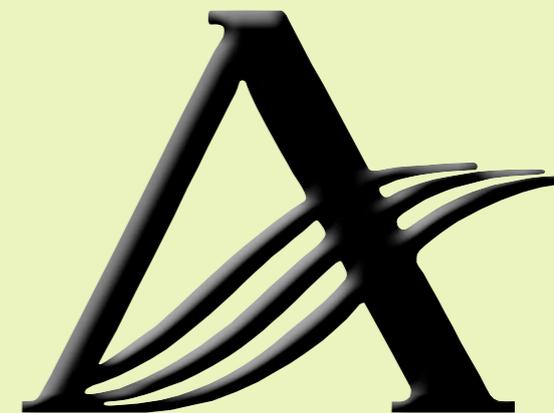
Due to increasing bandwidth and connection speeds, videos and other multimedia are becoming more common on the websites of state and local governments. Today, some government entities use their websites to post training videos for their employees, feature automated slide shows of recent public events, and offer video tours of local attractions.

These and other types of multimedia can present two distinct problems for people with different disabilities. People who are deaf or hard of hearing can generally see the information presented on webpages. But a deaf person or someone who is hard of hearing may not be able to hear the audio track of a video. On the other hand, persons who are blind or have low vision are frequently unable to see the video images but can hear the audio track.

### **Solution: Include Audio Descriptions and Captions**

Videos need to incorporate features that make them accessible to everyone. Provide audio descriptions of images (including changes in setting, gestures, and other details) to make videos accessible to people who are blind or have low vision. Provide text captions synchronized with the video images to make videos and audio tracks accessible to people who are deaf or hard of hearing.

-ADA Best Practices Tool Kit for State and Local Governments: Chapter Five



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