



How to Meet the
**Web Content Accessibility
Guidelines 2.0**

Second Edition

Foreword by Jen Simmons

Luke McGrath

How to Meet the Web Content Accessibility Guidelines 2.0

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**This book is for everyone
who makes the web better**

**May you have the heart
to keep trying**



**Well this side of Paradise!...
There's little comfort in the wise.
- Rupert Brooke**

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How to Meet the Web Content Accessibility Guidelines 2.0

Foreword

Have you ever broken a bone? Was it in your arm or hand? What if it happened tomorrow and suddenly you couldn't type for a while? What would you do? What if your own website, or the project you work on, was suddenly inaccessible to you? Without warning, you are cut off. Shut out, just because accessibility was "not a priority."

Or you decide to hire a new engineer, and find someone really smart and amazing. You'd be lucky to get them. And then you realize you can't hire them. They can't work on the project, because your team decided long ago that accessibility was "not a priority".

Or you work for two years, creating an amazing web-based tool, with a business plan to sell access to corporations. Only now, half of your potential clients must turn you down, because accessibility was "not a priority." You didn't want a government contract did you? Or any universities as clients? Or any corporations who've ever hired someone with a disability? No, you don't need their business... sure.

These aren't hypothetical stories. I know web professionals who were in these exact situations, or would have been, if they hadn't valued making websites that work for everyone. Odds are that you know them too. Or this is you.

In fact, if you don't have a disability already, it's likely that you will eventually. Unless you die very suddenly, you will age. Your body will change. Your needs will change. Creating websites with accessibility as a priority is about acknowledging this reality, and creating sites that work for a wide range of human bodies and needs.

If your team is made up of able-bodied 20-something developers who are under the illusion that they don't know anyone with a disability, then you might fall into the trap of thinking web accessibility isn't important, that it can wait until later or that other business needs are more urgent.

Don't do this.

To make a great website, you must not assume everyone is like you.

Nearly one in five people have a disability and many of those people have a disability that affects the way they use the web.

Luckily for us, the web is accessible by default. The web was invented in a time when computers were far more different from each other than they are today, when only a small percentage of computers had a mouse. It was a time when some computers had one-color displays, some were black and white, and some had limited full-color. Tim Berners-Lee designed a system that would work across a wide range of unknown conditions, slow networks, and a wide variety of computer hardware. The World Wide Web beat the competition precisely because of this interoperability.

If you follow the principles that are inherent to the web itself, and don't screw things up, then a wide range of humans with a wide variety of machines (including ones that haven't been invented yet) will be able to use your website.

* * *

Digital technology is powerful. It is revolutionizing our world. It extends human ability into the superpower range. The internet allows us to communicate instantaneously with anyone we want, around the globe. Sometimes we do so with tens-of-thousands of people. We can access in-depth information about anything, on-demand, and we carry this power in our pockets. We can take an idea and morph it into a movement. We rely on this technology to help us win where we would otherwise be weak. Digital technology helps all of us when we are having a hard time with something.

Why shouldn't that power extend to us when we are disabled? In remarkable ways, it can. Digital technology has the potential to open up previously inaccessible worlds for people who have disabilities that impose limits on their lives.

You build a great life by enlarging your ability for compassion. Not by looking down on others, but by honestly and openly seeing their experience as equal. By being curious. By wanting to dig through the layers to the complexity of what's going on. By being with another person.

We who make websites can make our work accessible. We have all the code and tools that we need. We just have to set things up correctly.

We just have to decide to include everyone.

The hardest part of making a team-based project accessible is getting the leadership of the team to decide that accessibility is a priority. I hope that your team has reached this point. And now you are picking up this book to figure out the details of how.

You are in great hands with Luke as your guide.

Jen Simmons

Host of The Web Ahead Podcast | www.thewebahead.net

Preface

I first got involved in web accessibility and the Web Content Accessibility Guidelines (WCAG) 2.0 in 2011. Since then, I have been learning everything I can about web accessibility and I don't expect to ever stop. I'm now putting my skills to the test and helping developers make their websites more accessible.

When I first read about web accessibility, I wanted to know everything and update all of my websites to AAA compliance immediately. A day later, I had scaled back my ambitions. I couldn't make head nor tail of the guidelines themselves; their sufficient criteria, endless definitions of terms I'd never heard of before, and general incomprehensibility left me bewildered.

I set out to make things better. I scoured through the techniques for every guideline and distilled all the advice down according to two simple criteria:

- Was it useful advice?
- Was it future-proof?

From this benchmark, I distilled over 700 hundred pages down to a little over 100. I used my own notes to write a book to help other people in the same situation.

How to Meet the Web Content Accessibility Guidelines 2.0 is everything you need, and nothing you don't. The simplest web accessibility tactics produce the most benefit for your users.

Disability and the Internet

Before we delve into the world of web accessibility, spare a thought for the brilliant advances that the World Wide Web has already made. Content placed on the internet has the potential to be more accessible than any physical content could ever hope to be.

Think about it. Can you see The Times bringing out a Braille version every day? Or an mp3 of every single story? Of course not. However, by putting content on the internet, it can be read by assistive technologies designed for all types of disabilities. The internet, when used to its full potential, can be a wholly inclusive tool for sharing information and services.

What is Disability?

When I use the term “disability”, I mean four different things:

- Sight disability – for example, blind, partially sighted or colour blind
- Hearing disability – for example, deaf or hard of hearing
- Motor disability – for example, problems with motor skills or slow movement
- Cognitive disability – for example, learning difficulties or problems with concentration or reading

This guide does not seek to define disability in any stronger terms than it is useful for making a website accessible to all users. It does not suggest that all disabilities fall into these categories or that they are mutually exclusive. Throughout this book, I talk about “users with disabilities” as this seems to me the best way to get my point across without patronising or offending.

What is Web Accessibility?

When people ask about web accessibility, they often know more than they realise.

Web accessibility isn't as hard to understand as you might think. It's a combination of common sense, empathy and understanding. They're all traits that most humans share, so you've got what you need already!

What is Web Accessibility in a Sentence?

Web accessibility means making your website available to as many people as possible.

Hang on! Isn't that what you wanted when you built your website? Isn't that what you asked for when you spent money on an SEO expert to bring you more visitors?

The truth is, until your website is accessible, you are turning away customers and leaving money on the table. According to Fifth Quadrant Analytics, "the disability market represents an annual disposable income of \$1 trillion—and \$544 billion in the US alone."¹

More and more businesses are developing their online presence because that's where their customers are. It's also where your customers are, and it's where your customers with disabilities are too.

Why Do You Need an Accessible Website?

There are three key benefits of having an accessible website:

1. Your website will comply with your country's equality law
2. You'll save money by working in accessibility on your own terms
3. You'll make more money by expanding your customer base



On top of that, there's the simple fact that you really can't put a price on making your website accessible to anyone with a disability.

Now, let's dig a little deeper into what web accessibility means, by using a real-life example.

The Common Sense Sweet Shop

Here's where your inbuilt understanding of web accessibility comes in. Say you run a physical business, a small sweet shop. You have customers walking in off the street every day and you're doing well. You'd love to do even better. Take a look at your shop. Is there a doorstep that might stop people in wheelchairs getting through your door? Are guide dogs welcome inside?

You wouldn't imagine running a shop that stopped people with disabilities becoming customers. In fact, you'd soon face legal challenges if you did.

Let's take the analogy a little deeper. Have you organised your sweets in jars so that they're easy to find? Have you labelled the jars in clear writing so that people can read them? These are all things that make good business sense as they help your customers buy easily and buy more. You wouldn't imagine running a business any other way.

Web accessibility really is no different to the Common Sense Sweet Shop. It's about making your website a place where everyone can become a happy customer. It's not about adding burdens on yourself, but about removing obstacles from customers.

Many of the principles of web accessibility are small, common sense guidelines that you can start today. Many of them you will already have covered when you designed your website (assuming you labelled your jars correctly when you did).

The truth is, you don't so much need to ask about "web accessibility" because it's the same as everyday accessibility. You just need a little guidance through the rules.

The Inaccessible Sweet Shop

Now, let's imagine a sweet shop over the road that operates differently. There's a huge step at the front door that only the tallest people can climb over, the owner sends guide dogs packing and, when you get inside, the owner keeps the lights switched off because he wants to save money. Even if you brought a torch with you, the sweets are in buckets scattered around the shop without any labels.

You'd love to complain, but you can't find the owner. He might be there in the dark, or he might not, and there are no set opening hours for you to contact him. He's probably hiding from annoyed ex-customers and the lawyers of several charities.

How long will his business last?

You Have Users With Disabilities

At this point you might be thinking: 'I don't have any users with disabilities, no one has ever complained about my website.' Chances are, no one will complain, they're already buying from someone else. Do you think the Inaccessible Sweet Shop got any feedback before it went out of business?

Disability affects 19% of working age people in the UK² and 19% of all Americans.³

Disability on the internet includes things like:

- Problems with sight
- Problems using a mouse or keyboard
- Problems with hearing
- Problems with reading and understanding

But web accessibility also helps people who:

- Have a slow internet connection
- Have a small screen or unusual device
- Can't listen to sound at work
- Use an old web browser or operating system

Web accessibility also helps older users, who might have problems with motor skills, text sizes and hearing (among other things). Within a decade, the United Nations estimates over a billion people in the world will be over 60 years old.⁴ Web accessibility protects your website against demographic changes and opens your business to everyone with an internet connection.

Finally, remember that disability is not always permanent; there are many reasons why someone might have a short-term impairment due to illness or accident.

Accessibility and Design

Building an accessible website (or modifying an existing one) does not have to be contrary to building a good-looking website. This guide will explain ways in which websites can conform to the Web Content Accessibility Guidelines 2.0 without compromising on design or content.

One of the great strengths of the internet is its diversity, yet web designers often forget that users with disabilities value this too. Making websites accessible is not an exercise in making all websites look the same. If you are interested in accessibility (and I assume you are if you're still reading), then you've probably seen so-called 'accessible' websites before and are already familiar with their incredibly 'texty' interface.

Images are often the first to go during an accessibility exercise, yet only users with visual disabilities have a major problem with them. You'll see in the first guideline that good images can really help users with a cognitive disability understand your website.

Accessibility and Search Engine Optimisation (SEO)

Search Engine Optimisation (SEO) is the practice of making a website as attractive to search engines as possible. Websites with good SEO will appear at the top of search results for keywords associated with your business.

SEO and accessibility go hand-in-hand because websites that are inaccessible to users with disabilities are also inaccessible to search engines. Search engines can only read certain content, cannot listen to or watch media, and do not use a mouse. Their understanding of a website is based on limited features and they do not always understand the context.

One of the most powerful elements of SEO is creating machine-readable content. This is content that can be read by humans as well as assistive technologies, like screen readers.

The days of 'stuffing' content full of keywords to rank higher have gone. Search engines look for in-depth content with semantically linked keywords that appear naturally. For example, descriptive alternative text for images helps both search engines and users.

Many other areas overlap, including descriptive page titles, descriptive link text, logical structure, text transcripts and readable URLs.

Accessibility and the Law

Accessibility takes on different forms across different territories, but most have some kind of anti-discrimination law that prevents discrimination based on ability.

In the US, Section 508 of the Rehabilitation Act applies to government websites as well as national anti-discrimination law. In the UK we have the Equality Act 2010 that requires equal access to public or private services. Ontario, Canada has the Accessibility for Ontarians with Disabilities Act (AODA) mandating WCAG 2.0 Level A compliance. There are many more international accessibility laws that apply in different territories, which often map to the Web Content Accessibility Guidelines 2.0 as well.

The extent to which online anti-discrimination law is enforced is minimal as things stand. However, if you are a relatively successful business (or hope to be), it's not so hard to imagine a letter coming through the door requiring you to bring your website into line with the law.

As the case for accessibility on the internet grows (and I'll make sure it does), it is only a matter of time before the biggest businesses get an uncomfortable tap on the shoulder. Logically, the same is true for local councils, government departments, schools and universities. Planning for increased accessibility isn't just a legal requirement, it is a moral imperative and makes business sense. Doing your bit shows that you care about all of your users. As an added bonus, think of how your online customer base could grow.

Say you run BassFishing.com and your main competitor is BassMasters.com. By adding accessibility to your website, you can please your existing users and the moral high ground will also attract some of your competitor's users over too (Why do you think some coffee shops offer Fairtrade coffee?). It may not be long before BassMasters.com follows suit, but you will always be the website that moved first (the fact that bass fishers have two accessible websites to choose from is a bonus for the rest of us). This really is a case of leading and the rest will have to follow.

What are the Web Content Accessibility Guidelines?

The Web Content Accessibility Guidelines, often abbreviated to WCAG, are a series of guidelines for improving web accessibility. Produced by the World Wide Web Consortium (W3C), the WCAG are the best means of making your website useful to all of your users.⁵

Although they are not an all-inclusive list of issues facing web users with disabilities, they are internationally recognised⁶ and adopted⁷ standards.⁸ The guidelines explain how to solve many of the problems that your users with disabilities face.

Web Content Accessibility Guidelines 1.0

The W3C's first incarnation of WCAG in 1999 was a huge leap in web accessibility, bringing together years of useful work by developers from across the world.⁹

The Web Content Accessibility Guidelines 1.0 had 14 guidelines and divided them into 3 priority levels:

- Priority 1 – the most basic level of web accessibility
- Priority 2 – addressed the biggest barriers for users with disabilities
- Priority 3 – significant improvements to web accessibility

Web Content Accessibility Guidelines 2.0

The current set of guidelines has been in force since 2008, and will run for many years yet. The guidelines are more technologically neutral than WCAG 1.0, allowing them to stay useful for longer.¹⁰

By designing WCAG 2.0 around principles and not technology, the W3C created an ethical statement as well as useful guidance.

The principles of WCAG 2.0 are:

- **P**erceivable
- **O**perable
- **U**nderstandable
- **R**obust

You could say that a good website is a POUR website! (That joke works better on a screen reader, trust me.)

The beauty of a principled approach like POUR is the emphasis on understanding your users. Learning all the guidelines isn't good enough if you don't know why they exist.

Perceivable

The principle of a website being perceivable is all about the senses people use when browsing the web. Some of your users may have difficulties with one or more of their senses, making them reliant on assistive technology to browse your website.

The three main senses that the guidelines can help with are sight, sound and touch. With WCAG 2.0, you can make sure that users can perceive **all** the information on your website.

Operable

The principle of a website being operable is about the actions people take when browsing. This covers the different ways in which your users browse the web. Some of them may have motor difficulties, which means they use their keyboard to navigate and some users who have sight impairments often prefer to use a keyboard rather than a mouse too.

The main issues for making your website operable are ensuring good keyboard-only navigation, avoiding setting time limits for your users and helping them out if they make errors on forms.

Understandable

Making a website understandable is a different kind of task to the first two principles. A perceivable and operable website means nothing if your users can't understand it.

Your website must use clear terms, have simple instructions and explain complex issues. You must also make your website function in a way that your users understand, by avoiding unusual, unexpected or inconsistent functions.

Robust

A robust website is one that third-party technology (like web browsers and screen readers) can rely on. Your website must meet recognised standards, such as using clean HTML and CSS. This minimises the risk of your users relying on technology that cannot correctly process your website.

WCAG 2.0 Levels

The Web Content Accessibility Guidelines 2.0 are organised into three levels of conformance:

- Level A – the most basic web accessibility features
- Level AA – deals with the biggest and most common barriers for disabled users
- Level AAA – the highest (and most complex) level of web accessibility

For most websites, Level AA plus some Level AAA is the best target. That's because some of the highest level guidelines simply can't be applied to all websites. However, one of the problems with the three-tier structure is that if people know they can't attain AAA, they won't even look through the guidelines to see where they can improve accessibility. With all of your projects, you should comply with all the guidelines you can, whether you want Level AAA or not.

Starting with Level A is a great way to make progress and begin helping out your users. Level AA is the standard many governments are using as a benchmark as this level targets the most common and most problematic issues for web users.

WCAG 2.0 Evaluation

Although the W3C's Web Content Accessibility Guidelines 2.0 are a huge step forward in improving web accessibility, they do have their issues. Primarily, they are almost impossible to understand.

Even experienced web developers sometimes struggle to make sense of the jargon-filled text of the guidelines. The W3C's explanations use terms and words that need separate definitions, some of which have further definitions within them.

Despite my earlier praise for WCAG 2.0's technologically neutral and principled approach, the guidelines offer little practical instruction for developers. The aim of this book is to begin to dispel the myth of complexity that the W3C have perpetuated. Most of the guidelines are common sense ideas that, when explained clearly, can benefit both developers and users.

How to Use This Guide

The intent behind this guide is to simplify the process of making your website accessible to WCAG 2.0 standards. I don't intend to imply that WCAG 2.0 is perfect, nor that they are the only suggestions to consider when designing for accessibility, but they are the most widely-used and recognised.

You can use this guide whether you are designing a new website, updating or auditing an existing website, or just doing some groundwork before you hire someone to help you. In fact, if you're in that final category, I hope this guide shows you that you might well be able to make the changes yourself (or at the very least, you'll be able to demand a much higher standard of work from your developer).

To get the most out of this guide, you need to know what your problems are. Start at Guideline 1.1.1 and work forwards, making notes on what affects your website and what doesn't. No video content? Tick off all the guidelines that don't apply with a big smile on your face.

Use this guide as the backbone of your accessibility strategy. Decide which level of accessibility you want to aim for (I'd suggest AA with any AAA that seem reasonable to you) and make your way progressively through the guidelines that affect your website. Where one or more guidelines overlap, or I've spotted a shortcut, you'll find a list of linked guidelines to speed you on your way.

If you want more information about adding accessibility to your regular workflow, make sure you read the 'Planning for Accessibility' section below.

One final thought: pay close attention to the 'Issues' section of guidelines you are adopting. As exciting as ticking off every single requirement can be, you must always ask whether it is truly useful to your users. In this section, I highlight problems with guidelines. For example, whether they are too strict or too lenient, and whether they might lead to later issues. Always base your decisions on the particular needs of your website and your users.

What This Guide Is

This guide is my interpretation of the WCAG 2.0. I wrote it in good faith and believe that following its techniques enables a website to gain a level of accessibility recognised by the W3C.

This guide attempts to explain the WCAG 2.0 by using simple English and straightforward examples. I do not reproduce every technique the WCAG 2.0 suggests, as some are outdated or too obscure. Instead, I explain the simplest and most design-friendly techniques that have forward compatibility with HTML5 and CSS.

One of the biggest differences you will find is that I have left out all references to providing an alternative version of a webpage in order to comply, as I do not believe that the answer to web accessibility lies in duplicating websites. All websites have the capacity to comply with all guidelines (well, except the impossible ones – more of that later) without doubling a website owner's workload and without further marginalising disabled users with ugly, featureless 'alternative' versions for their own good. I find this approach lazy, disrespectful and a complete waste of time – the opposite of good web design.

What This Guide Isn't

Following this guide is not a guarantee that your website meets the WCAG 2.0. Neither is this guide an exhaustive list of all the issues that can arise from accessibly designing a website.

The great strength of the internet and website design is the almost limitless amount of options available to you and accessibility does not need to put a lid on those possibilities. One thing I will repeat in this guide is the importance of actually testing a website with real users and asking for their feedback.

How This Guide Works

I have done my best to dissect, explain and advise on each of the WCAG 2.0 guidelines. Each guideline has a full page, or more, made up of:

- A statement of the guideline's level (A, AA or AAA)
- An explanation of why the guideline exists
- A 'What to Do' section
- 'Tips' for maximising accessibility
- 'HTML' you need
- 'Issues' you may have
- A 'See also' section, so you can easily find related guidelines

Planning for Accessibility

Implementing all of this accessibility into either a new or an existing website will be easier with a little planning. Don't suddenly throw all your resources behind converting your website in a day or two. Instead, make a plan of small, incremental changes.

Remember, the goal is to make an accessible website for the benefit of users with disabilities. Far better to take your time and get it right than any kind of rush job where no one will benefit. The next two sections should give you an idea of how to plan for accessibility.

Designing a New Website

Starting from scratch? What luck! You're taking the easiest route to web accessibility. Whether designing yourself or contracting out, make sure that you:

- Decide which level of accessibility you want to achieve
- Consider the types of content you are planning use and tick off guidelines that don't apply
- Start with your template (the header, navigation and footer)
- Add static pages one at a time, checking them for compatibility with the level you have chosen
- Think about the content you will add to your website over time. Draw up a set of rules for yourself and your writers so that all new pages meet the accessibility level that you want
- Put in place an editing stage so that someone else is checking pages for accessibility before they are published

Auditing an Existing Website

Auditing isn't as easy as starting from scratch, but it's achievable with good planning. In this case, there may be parts of your website that cannot meet some accessibility criteria and it's up to you whether to remove or replace these. Either way, ensure that you:

- Decide which level of accessibility you want to achieve
- Use an automated accessibility checker
- Start with your template (the header, navigation and footer)
- Draw up a list of your pages and rank them in order of importance. A combination of the most visited and the most value to your business is best
- Draw up a reasonable time frame to edit these pages (one a day, one a week, etc...) depending on your resources
- Write up a set of rules for yourself and your team so that all new pages meet the accessibility level you want
- Put in place an editing stage so that someone else is checking pages for accessibility before they are published

Here We Go

You've read the waffle, now it's time to let loose on that website of yours. Remember, take things slowly and read one guideline at a time. Above all, have fun with the process and make an awesome website that everyone can enjoy.

Principle One

- Perceivable

Information and user interface components must be presentable to users in a way that they can understand

What This Means

Users read websites in different ways, often making use of assistive technology (for example, screen readers, text-only browsers and refreshable Braille displays). These technologies should be able to understand the content on your website.

This is really the most basic form of accessibility; making sure that content is readable. There are, of course, several layers to claiming full accessibility under 'Perceivable', but Level A is relatively easy to achieve.

Tips

It is important to take into account the availability of assistive technology. Many users will visit your website using assistive technology and interact with your pages in ways you that might not expect. Throughout this guide, I will highlight the best methods for including such technologies in your design.

A few popular screen readers to research are:

- [BrowseAloud](#)
- [JAWS \(Job Access With Speech\)](#)
- [Lynx](#)
- [NVDA](#)
- [Window-Eyes](#)

It will be worth your time to test your website with a few of these products as you go. While the techniques in this guide may satisfy WCAG 2.0 criteria, there is no substitute for proper testing. If possible, find a group of users with a range of disabilities and ask them to try out your website – a local college or night class on basic computer skills might be a good place to ask.

Guideline 1.1

- Text Alternatives

Some users browse websites with images and other visual media turned off. These users rely on text alternatives to understand your content.

Text alternatives must provide the same information as the media they replace.

1.1.1 - Non-text Content (Level A)

Provide text alternatives for non-text content

Some users browse websites with images turned off (as do some users with slow internet connections). In place of the image, the user gets a text alternative. These must be true alternatives to the content: they must provide the same information

What to Do

- Add a text alternative to all of your images
- Add a text alternative to your audio and video (a succinct description of the topic)
- Add a name to all of your controls (such as 'Search' or 'Submit')

Tips

Alternative (or 'alt') text is a written replacement for an image, not an addition to it. This means that the text should describe the image and give the same information that the image would if seen. This isn't always easy and people don't always agree on what the 'same' information is. Ask yourself: what does the picture convey?

If the image is your company logo, your company name is a good bet. If the image is of text, replicate the text exactly. For all other images, describe the image helpfully and succinctly: we don't need to know it's a picture of 17,387 trees if the word 'forest' will serve the same purpose.

Whatever you do, alt text is not an opportunity for keyword stuffing. Adding out-of-context keywords as alt text is terrible for accessibility, it does not meet WCAG 2.0 guidelines and it can even harm search engine rankings.

Alt text is relatively simple to audit and easy to fix, making this a quick win. One of the best ways is to add the WAVE toolbar to Firefox and check a page.¹¹ As most sites have a standard template, you can catch your biggest issues with one sweep. Banners, sidebar images and footers only need fixing once to improve every page on your site. After that, you'll need to check your website page by page.

HTML

If you're using a good quality content management system, you will be able to add alt text with very little effort. For example, WordPress allows you to edit the alt text of all images that you insert into posts and pages.¹²

If you've got something a little more bespoke, here is some information and code that will help:

An image on a website has two essential elements, its source and its alternative. The source is the location of the image and the alternative (alt) is what I've just been talking about.

```
► [html]
  
[/html]
```

Here's how a form might look like with names added:

```
► [html]
  <form><label for="option1">Option One</label>
  <input id="option1" name="type" type="radio" />
  <label for="option2">Option Two</label>
  <input id="option2" name="type" type="radio" />
  <input name="submit" type="submit" value="Submit" /></form>
[/html]
```

Exceptions

There are a few types of image that don't need alt text: spacers, icons, purely decorative, tests and CAPTCHA images.

Icons are usually used to complement text, rather than replace it, so there's no need to duplicate your efforts here. Customers with screen readers would just hear the same thing twice anyway, which is the opposite of what we're trying to do.

Spacers are images used for padding, often for ease and not good coding. They are often used to preserve formatting and present no information, so they don't need alt text.

Decorative images are ones used just because they look nice. They have no information or use other than for their aesthetics.

Tests and CAPTCHAs that would be undermined by text alternatives don't need them.

Although if you do use CAPTCHA, use one with an audio alternative or add your contact details somewhere close by to help your users if they get stuck.

In all these cases, use 'null' alt text by simply leaving the alt text out, but do put the quotes in:

```
► [html]
  
[/html]
```

Screen readers will then skip the image rather than reading the filename or trying to substitute an alt text.

Issues

The W3C demand for the same information to be included in an alt text as an image is difficult to achieve. For starters, who's to say what 'the same' is? If I showed you a picture of a sunrise, is it enough to use 'sunrise' as alt text? What if there was a tree in the background of the picture too? Does 'sunrise over a tree in the background' work? At what point does a description become too long to be truly useful?

The best bet here is to be honest. If the image has been used to convey a sunrise to regular users, then 'sunrise' is all that other users need to know. If you have a series of different pictures of sunrises, then mark them out as different in the alternative text.

See Also

- [Guideline 1.4.5 – Images of Text](#)
- [Guideline 1.4.9 – Images of Text \(No Exception\)](#)

Guideline 1.2 - Time-based Media

Time-based media means audio or video media. It's called "time-based" because the information is only available for the duration of the recording.

Media like this is hard for some users to understand – the key is to provide a range of alternatives.

1.2.1 – Audio-only and Video-only (Pre-recorded) (Level A)

Provide an alternative to video-only and audio-only content

Some users find it difficult to use or understand things like podcasts and silent videos or animations.

What to Do

- Write text transcripts for any audio-only media;
- Write text transcripts for any video-only media; or
- Record an audio-track for any video-only media;
- Place the text transcript, or link to it, close to the media.

Tips

Audio-only and video-only content needs to be supported by text transcripts that convey the same information as the media. Sometimes this is quite simple, other times you have to make a judgement call on what that really means. The best bet is, as always, to be honest with your users: what does the media convey and does your transcript do the same? Could you swap one for the other?

One of the most common uses for text transcripts is when a podcast is published online. Embedding a podcast in a page is a great way of sharing your content but no good for your customers with hearing impairments. A text transcript should contain everything mentioned in the recording.

Less commonly, some videos do not have sound. Your customers with visual impairments need help with this kind of content. A text transcript for a video without sound should describe what is going on in the video as clearly as possible. Try to focus on what the video is trying to say rather than getting bogged down with detail.

As an alternative for video-only content, you could also choose to record an audio track that narrates the video.

For both audio-only and video-only, create your text transcript and place it either directly beneath the content or insert a link next to the content.

Exceptions

If the content is itself an alternative (you don't have to provide a transcript of the audio track you provided to explain the silent video you used).

Issues

Already we can see that even gaining Level A can be hard. Many users will simply avoid using media content to pass Guideline 1.2.1, but this makes the internet a poorer place.

See Also

- [Guideline 1.2.2 – Captions \(Pre-recorded\)](#)
- [Guideline 1.2.3 – Audio-description or Media Alternative \(Pre-recorded\)](#)
- [Guideline 1.2.5 – Audio-description \(Pre-recorded\)](#)
- [Guideline 1.2.7 – Extended Audio-description](#)
- [Guideline 1.2.8 – Media Alternative \(Pre-recorded\)](#)

1.2.2 - Captions (Pre-recorded) (Level A)

Provide captions for videos with audio

Closed captioning is perhaps the most well known tool for people with disabilities. Often known as subtitles, or abbreviated as CC, closed captions have been around since the 1970s.¹³

Multimedia is becoming more and more popular as the average home gets faster and faster internet access. Videos are cropping up everywhere, from news websites to product pages. One of the most visited websites in the world, YouTube, is specifically for online videos. As website owners turn to video, you must think of how users process your multimedia content.

What to Do

Add captions to all videos with sound.

Tips

Adding captions to a video is a relatively hard task, compared to something like writing a text transcript or providing alternative text. Captions must be synchronised with the video to be useful, which means marking up the plain text with timestamps.

There are plenty of paid services out there that will do your closed captioning for you, often at reasonable rates. There are also many free programs that will attempt to create your caption file for you, but none as good as human eyes and ears just yet. Like with many areas of web accessibility, your choice is between spending time (writing your own captions) or money (outsourcing).

Google has written a very clear how-to guide on adding captions to YouTube videos, which I'm not going to try and better.¹⁴

Issues

The main issue here is having enough time to insert the captions, especially if you rely on video as a large part of your content. The key is to build the time into your workflow from the start (the same goes for guidelines that require transcribing such as Guideline 1.2.1. If you have written a full text transcription then you already have the basis for your captions.

If you feel you don't have the time for captions, consider cutting the number of videos you upload. One accessible video that all your potential visitors can enjoy is better than two videos that alienate some of your audience.

See Also

- [Guideline 1.1.1 – Non-text Content](#)
- [Guideline 1.2.1 – Audio-only and Video-only \(Pre-recorded\)](#)
- [Guideline 1.2.4 – Captions \(Live\)](#)

Thank You for Reading

I hope you've enjoyed this free sample of How to Meet the Web Content Accessibility Guidelines 2.0.

If you have any questions about the book or how it can help you learn how to develop your projects accessibly, please get in touch:

Email: luke@wuhcag.com

Tweet: [@lukejmcgrath](https://twitter.com/lukejmcgrath)

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Jeff Law

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Radek Pavlicek

"Really put the whole WCAG 2.0 challenge in perspective for me.

Uses common sense (gasp!) to consider implementation."

Elliana James

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Helen Wallworth

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