

INTRODUCTION TO ACCESSIBILITY

OR: AN ADVENTURE FOR ANY AND ALL WILLING



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Epigraph

Fairy tales, then, are not responsible for producing in children fear, or any of the shapes of fear; fairy tales do not give the child the idea of the evil or the ugly; that is in the child already, because it is in the world already. Fairy tales do not give the child his first idea of bogey. What fairy tales give the child is his first clear idea of the possible defeat of bogey. The baby has known the dragon intimately ever since he had an imagination. What the fairy tale provides for him is a St. George to kill the dragon.

G.K. CHESTERTON, *TREMENDOUS TRIFLES* (1909)

Foreword

“Even the smallest person can change the
course of the future.”

-J.R.R. Tolkien

You’re going on an adventure!

Problem: the adventure of accessibility is more filled with confusing signage, deep forests, and the occasional grue than praise and piles of gold.

This short ebook is made to try and help those new to accessibility discover tools and information. As such, it does not contain much technical knowledge - you are not going to delve into specific HTML or CSS here, nor discuss ARIA roles, nor specifics of mobile development. This ebook does not assume the reader is a practicing accessibility professional, developer, or designer - anyone can advocate for accessibility in their role. They might be limited in some contexts, such as advocating for clear headlines and hierarchies in writing or providing multiple methods of contact, but just like in tabletop gaming, every role has something to contribute.

To return to the game analogy: we take a lot of gaming tropes for granted, such as why a fantasy adventurer in a tabletop game knows to check the taverns or guilds for information. In at least one system, class features start becoming available around the character’s second level in the class. In the real world, though, it sometimes is not so easy to get that first lead, that first argument, that initial boost of why this all matters in the first place.

I hope this book gives you that quick introduction. That quick boost. The equivalent of picking up a new game, making your character, and going through the

tutorial; the equivalent of a tabletop character reaching their first class feature, and figuring out what else they might be able to do.

Thank you for picking up this ebook and I hope it serves you well, no matter what your role (or class!) turns out to be.

Thank you,

Katriel

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Chapter 1: Accessibility and Disability

The best definition of disability I have personally encountered: disability is when you and your environment are mismatched (source: Mismatch: How Inclusion Shapes Design by Kat Holmes).

Having a disability does not necessarily mean someone is “on disability benefits”. Not only does “disability benefits” vary depending on country, state, specific program, and that program’s own definitions of eligible conditions or statuses, but disability as a concept is commonly stigmatized and people thought of as “lazy”. In other words, someone with a disability often also fights to be taken seriously. Stereotypes of disabled people often include dismissal by other people: i.e., that the person is like a child and cannot make decisions by themselves, or the person is somehow lazy, or not trying hard enough, not committed enough. This is in line with other marginalizations, like racism and sexism. When we talk about the biases and antagonism faced by people with disabilities - or who are perceived to have disabilities - we call that ableism.

However, disability marginalizations are something that anyone can experience at any age, with any ancestry, no matter what your gender is. In the USA, seeing a doctor for official diagnoses can also run into this assumption of incompetence, AND can be a costly undertaking for people. Not all disabilities are even immediately visible; disabling conditions like diabetes or Crohn’s disease, not to mention conditions like post-traumatic stress disorder, are not immediately apparent and visible unless the person is either in the midst of medication maintenance, or in the midst of a crisis.

However, you CAN ask if someone DOES know if they need any accommodations. In the Web Content Accessibility Guidelines, for example, there are requirements to be mindful of timed events – not only because extra time is often necessary for people

navigating a website by keyboard or via a screen reader, but because it's easy to be interrupted by a call, meeting, or other “temporary” situation (taking care of a child, package delivery at the door, institutional fire drill, other things that would interrupt focus). For user studies, you can ask if someone uses a screen reader.

For various privacy-related reasons, you should not ask them for their health diagnosis or assume what an individual needs. Two people with the same condition may request differing supports, even if certain supports are commonly known. Building in accessibility supports and features is always best ([go to Curb Cut Effect for more detail](#)).

Many things can become disabilities – whether temporary, intermittent like migraines or pain flares. The conditions can be more chronic/permanent or considered part of a process like aging. Temporary disabilities might include things like surgery recovery or even a simple minor sprain from hiking in the woods, or cuts from crafting. Temporary disabilities might also include multitasking; for example, being called away for an important call or meeting, and now needing to refocus on what part of the form or policy setting you were trying to complete and activate.

Some disabling conditions are only a problem if not accommodated; for example, many people do not consider requiring glasses as a disability. But someone who has broken their glasses or otherwise needs a replacement might feel differently, and still might need to resize text, change viewport area / resize their browser, change their font size, etc to accommodate their needs in the meantime. Likewise, someone who gets migraines does not often get migraines every day. But when they DO experience a migraine, they might want to change their application from light mode to dark mode to ease the stress on their eyes. People with diabetes often can manage their condition, but if the person cannot afford insulin, it can be a major crisis and swiftly become a medical emergency.

Likewise, a condition like arthritis might not be considered “a disability” because the condition is both common and associated often with age. This is also the case with some loss of mobility or eyesight; a very young person does not always have a good grasp of items like a cup, just as an older person may experience tremors or have issues with fine motor control. Due to the stigma of disability, people can internalize this stigma (called “internalized ableism”) and believe many misunderstandings and stereotypes about disability.

These factors impact even measuring statistics about disability, as different agencies may have different criteria for what constitutes a disability - with stigma, marginalization, and ability to get care or workarounds all playing a role. The concept of masking, a term used by the neurodivergent communities such as those with autism, serve very well here. People with disabilities, depending on the disabilities, learn to mask how much pain they are in, medicate to just being able to function, or might encounter economic barriers - for example, someone has to learn American Sign Language or Braille in the first place. Power wheelchairs in the US can cost thousands or tens of thousands of dollars. Hearing aids can vary and often lock in users with proprietary hardware. If those companies go out of business, replacing a hearing aid in part or in whole requires going to a new company - and the time, expense, and resulting issues in interactions in the meanwhile all involved.

Accessibility is also not common. This is true both for the built environment - accessibility of navigating sidewalks or even if a sidewalk is present and clear, for example, or if a business location is accessible - as well as for the digital environment. During 2020-2022, this lack of digital accessibility was made even more stark when people were trying to get appointments for the Covid-19 vaccine, organize information or applications regarding federal or state agencies, or to check their health information. Many forms online were not designed for keyboard navigation, screen reader users, and other common accessibility needs, simply because accessibility was among the aspects first to cut or dismiss when fixing bugs, remediating code, or pushing features to live use.

Years of pushing accessibility to the side made the resulting cracks in the system even more apparent during this time.

But that does not mean accessibility is a useless endeavor.

Chapter 2: 5 Reminders to Clarify Accessibility

Consider: what do you mean?

When we say “accessibility”, we can mean different things. These things all overlap and can influence each other, but it is important to seek clarity in what we are discussing.

Are we talking about:

- Being able to easily discover a product, service, or some information?
- Being able to physically enter/exit or move around within a building?
- Being able to physically find a building or service point of contact? For example, public transit stations or stops may not be physically navigable in a wheelchair.
- Being able to afford the cost of services, entrance (like an event ticket), hardware, membership, school, or another economic factor?
- Being able to access information online (text size, information structure, keyboard navigation, etc)?

Improving one of these factors can improve others. For example:

If an event website improves its digital accessibility, it also can improve the rate of people discovering the event in the first place.

OR

If an event website improves its physical accessibility – for example, at the event venue – it might also improve discoverability and movement within the event, see more engagement, etc.

But clarifying what you mean helps.

That way, it's more difficult to consider "a website that is accessible" as just one that's discoverable on search engines, if you mean specifically whether the website information is accessible to someone with disabilities.

If you mean discoverability in some sense, such as physical or economic, mention that. It might need only be mentioned at the first mention, or brought up only once in a conversation, but this helps to clarify what you mean - and in what other ways accessibility might help, or in what other ways you still need to consider.

Chapter 3: 4 Reasons to Care

Why is accessibility important?

Disclaimer: At the end of the day, I cannot get you to care about your fellow human beings.

That being said, I CAN point to the following common arguments for improving digital accessibility.

1. Expanding Customer Base

20-25% of the global population have some kind of disability or impairment – this number is pre-Covid, and the more we are finding out about the long-term effects of the Covid-19 virus, this number may change. If you are focused on users at the individual level, improving accessibility not only helps non-disabled people ([go to Curb Cut Effect section for more details](#)), but also helps you reach more prospects in general!

2. Opening Business Segments

What if you are B2B? Due to laws and regulations such as the European Accessibility Act, and Section 508 of the Rehabilitation Act (USA), improving digital accessibility can help improve B2B relations and contracts, opening up functional audiences (government sector, nonprofit, European Union businesses) to you. In other words, if your company sees fit to comply with the EU GDPR for data privacy, it should see fit to comply with accessibility requirements of their website as well for the same reasons.

3. Doing Due Diligence with the Law

Accessibility overlays such as AccessiBe have been found in court to not protect a business from legal liability (source: Overlay Timeline). The business, in other words, must still follow accessibility requirements otherwise risk complaints or suits – using an

overlay plugin does not count as due diligence for legal obligations. This also means that some of the marketing for these overlays and plugins are misleading at best. Whether due to a specific accessibility-related law, or general nondiscrimination laws, improving your digital accessibility can help you protect yourself.

4. Competing With Advantage

This relates to the legal requirements (if any) and the factor of opening up customer areas.

Unfortunately, accessibility is NOT common throughout the Internet. The WebAIM Million Project estimates that in 2024, out of the million home pages tested, there was an average of 51 automatically detected errors per page (source: <https://webaim.org/projects/million/>).

While this test involves automatically detected errors and not the full scope of accessibility testing, this shows that just because a library, content management system, or website pattern is commonly used, it does not necessarily mean that system or library is accessible, or produces accessible output. The user pattern might also not be accessible to keyboard users or screen reader users, let alone anyone using dictation (speech to text) software. Libraries/components may have accessibility information, but that information may be limited: for example, the presence of an accessibility conformance report (or VPAT) does NOT mean that the product meets any accessibility requirements.

The silver lining of all this is that you will have a competitive advantage if you build in accessibility. If you can say you meet WCAG 2.1 or 2.2 at Supports or Partially Supports, you're providing your product or service an edge; even if you cannot commit to meeting those success criteria at a given level, improving the accessibility with what you CAN build in goes a long way.

Some companies also have their own accessibility resources freely available to the public. For example, Microsoft and Adobe already have tips and resources for improving

accessibility within Office documents or resources for improving accessibility in Creative Cloud applications. However, be careful; some companies are better at marketing and legal efforts than the usefulness of their product, and ingrained bias is a known problem in technology. Accessibility overlay companies are an example of this, with a recent (as of this writing) lawsuit against one overlay company for misleading marketing.¹

1. For more information on overlays in particular, please check the Overlay Timeline and Overlay Fact Sheet in [the Resources section](#).

Chapter 4: The Curb Cut Effect

Consider: what do you use that was originally designed for people with disabilities?

The “curb cut effect” means that something designed for one customer segment (in this case, people with disabilities) impacts other customer segments and improves their experiences as well. Curb cuts – the ramps in sidewalks – were originally due to demands made by disabled veterans and students in California to make it easier for wheelchair users to navigate campus buildings.

* * *

Suggestion: take a moment to imagine the last time you saw this architectural feature – and to think about who uses curb cuts today.

* * *

Wheelchair users still use curb cuts, but so do skaters and skateboarders, bike riders, small children, people walking their dogs, people with baby strollers, people with cargo loads on a cart or dolly wheeling deliveries or supplies or groceries. The presence of the curb cut improves the experience for these people too.

A more digital example is the presence of voice controls/assistants like Siri, or captions on television shows. A voice control can be used when cooking or driving, for example - in other words, you are multitasking and trying to be as safe as possible. And even if you do not identify as disabled, captions on television or film can be useful in the case of ambient noise (whether you have noisy roommates or excited kids or are cooking for a dinner-and-movie night!) or to help make sure that you understand what is going on.

If you look at the Web Content Accessibility Guidelines, criteria like Success Criteria Touch Target Size and Info and Relationships are there not only to aid people who have mobility or tremor issues, or to help screen reader users, but to improve the experience for everyone: for example, the Touch Target Size minimum helps guard

against accidentally emptying a digital shopping cart because “Empty Cart” and “Remove Item” were too close together. It also helps with discoverability of a call-to-action button, or to point out a link or navigation item in the first place (such as directing a user to complete a user profile, check an authentication method, or to go to their email client for a receipt, a requested download, or other deliverable).

Ensuring relationships of your site are clear, and definitions are clear, also helps guard against silos and jargon. Someone unfamiliar or new to your industry might not know all the terms; OR, you may be using a term in a new way. You might know where to find a given piece of information, but someone new to your product does not. Trainings and documentation should be accessible as well, for similar reasons! This is also useful if you have multiple parts of a process: this way someone can tell which part of that process they are on, and what they have left remaining to complete.

Returning to those curb cuts: more people use a ramp than use stairs. Improving accessibility improves usability for all.

You can read more about [the story of the original curb cuts at the Stanford Social Innovation Review](#).

Chapter 5: 7 Improvements You Can Make Today

Or, “ways to level up in accessibility”

These improvements are not meant to be exhaustive, but to serve as a starting point. Sometimes constraints on frameworks, third-party platforms, etc may restrict what you can improve; however, these improvements are going to give the maximum improvement with minimal configuration involved.

- **Are inputs and interactions navigable using a keyboard?**
 - Impact: not only do data entry users prefer keyboard when going through spreadsheets or when filling out forms, keyboard users also can include people with chronic pain, or people using systems or browsers that may render mouse interactions differently (Windows and Mac) or using assistive technologies that parse programmatically through the DOM. More testing may be needed for screen reader users for content.
- **Are there multiple points of contact - email, website contact form, company phone number?**
 - Impact: this helps not only in cases of failure of any one of them (like issues with cell phone signal in an office building or website bugs) but also helps provide a method that is accessible to multiple groups of people of all ages and abilities.
- **Am I using the word "accessibility" and clarifying any overlapping meanings?**
 - Impact: we use "accessibility" in different but overlapping ways. For example, saying a building or event is accessible can mean that the building is available to reach via public transit, not necessarily that a

wheelchair user can navigate once within the building, or that event information at that building is in digitally accessible formats. We also use accessibility to mean economic access: such as the cost of an event ticket to a member of the public. It also helps against stigma: saying "accessible parking space" is preferred over "disabled or handicapped parking space". Be kind and clarify!

- **Does a user know where they are in finding information and what their next steps can include?**
 - Impact: this improves the usability for everyone. Who among us has not gotten distracted and needing to find information such as account information - that could be in multiple places on a website? Or configuration information? This also ensures information architecture and hierarchies (headings, etc) reflect what you want the application or website to do.
- **Are there any obvious risks or intrusive content such as frequent flashes, or animation that could cause physical harm?**
 - Impact: epilepsy triggers, migraine triggers. Autoplaying sound and animation can also take programmatic focus away from keyboard or interrupt a screen reader. This can also be considered too distracting for people without photosensitive conditions.
- **If posting on social media or using images, do those images require alt-text?**
 - Alt-text is used to convey meaning and information. Sometimes, images are meant to be decorative flourishes and do not need alt text. However, images that include text or images that reflect some meaning – for example, a grouping of spring flowers to indicate spring, or carved pumpkins to represent Halloween – might require you to think about why that image is included, and what you want to emphasize in it.

- Alt-text impacts those who have slow connections, need clarification on what about the image is important (intended meaning), and impacts screen reader users or users with low vision. It can also help users who are dealing with issues like graphic loading issues or dealing with glare, adverse lighting conditions, or other situational or temporary conditions.
- **Are there colors representing meaning or information, like distinguishing a link ONLY by color, or color-coding to indicate statuses like success or failure?**
 - Within the Web Content Accessibility Guidelines there are criteria about non-text content and a criteria referred to as “not only color” – i.e., you can have a green button that says “Complete Registration”. That’s fine. But referring to said button as just the green button, or NOT having that text label? It can get confusing quickly!
 - Links should also be distinguished from body text and NOT only through color. You can still change the color of a link; however, it is best to also include something like an underline, to ensure clarity in different lighting conditions, acknowledge people who are colorblind or reliant on clear labeling. It helps everyone to know where they are, what the status is, and where they need to go.

Chapter 6: Resources

Enclosed is a selection of my favorite resources on accessibility, grouped by general category: Websites, Legal References, and Books.

Websites

- Accessible Social - <https://www.accessible-social.com>
- AbleGamers/Accessible Gaming - <https://ablegamers.org>
- Can I Play That?¹ - <https://caniplaythat.com/>
- Deque University for training and courses - <https://dequeuniversity.com>
- Game Accessibility Guidelines - <https://gameaccessibilityguidelines.com/>
- Overlay Fact Sheet - <https://overlayfactsheet.com/en/>
- Microsoft Accessibility - <https://www.microsoft.com/en-us/accessibility>
- Smashing Magazine (accessibility category) - <https://www.smashingmagazine.com/category/accessibility/>
- WebAIM Million Project (yearly study of top million homepages for accessibility) - <https://webaim.org/projects/million/>
- Web Content Accessibility Guidelines (current version at time of writing is WCAG 2.2) - <https://www.w3.org/TR/WCAG22/>

Communities such as r/accessibility on Reddit, or looking up Slack or LinkedIn groups, might also be helpful.

Legal References

- United Nations: Disability Laws and Acts by Country/Area -
<https://www.un.org/development/desa/disabilities/disability-laws-and-acts-by-country-area.html>
 - European Union (via EUR-Lex): Accessibility of products and services -
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=legisum%3A4403933>
 - Overlay Timeline - <https://overlaytimeline.com/>
 - US Access Board: About the ICT Accessibility 508 Standards -
<https://www.access-board.gov/ict/>
 - Law Office of Lainey Feingold: Website Topics -
<https://www.lflegal.com/topics/>
 - Lainey Feingold is a speaker and lawyer who often discusses accessibility from a legal perspective, including information and news on settlements, accessibility lawsuits, and the interaction of information accessibility and laws like the Americans with Disabilities Act.
- * * *
- Web Content Accessibility Guidelines -
<https://www.w3.org/TR/WCAG22/>
 - Repeated here due to the alignment of various accessibility laws incorporating by reference or mentioning the Web Content Accessibility Guidelines in how to meet the law or policy.

Books

Available wherever books are sold. Some of these books may have ebook versions, if you prefer to use those formats.

- A Disability History of the United States (Kim Neilsen)
- Against Technoableism (Ashley Shaw)
- Demystifying Disability (Emily Ladau)

- Mismatch: How Inclusion Shapes Design (Kat Holmes)
- Technically Wrong: Sexist Apps, Biased Algorithms, and Other Threats of Toxic Tech (Sara Wachter-Boettcher)

1. Disclaimer: Katriel Paige had written one article for Can I Play That in 2020:

<https://caniplaythat.com/2020/03/01/accessibility-review-fire-emblem-three-houses/>

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Accessible Player Experience Training (AbleGamers Charity):

<https://accessible.games/certified-apx-practitioner-course/>

Chax Accessibility Training: <https://www.accessibilityunraveled.com/>

To fantasy writers and creators, DDAL administrators, freelance tabletop designers across different companies, and the narrative team(s) for Larian Studios: thank you for inspiring not only a tabletop metaphor for this ebook, but a special thanks to those who try to further accessibility and representation in their works.

Special thanks also to Oakes Spalding, for clarifying the story behind a common series of misquotations attributed variously to G.K. Chesterton, Neil Gaiman, and Terry Pratchett - and for verifying the original quote, which serves as this ebook’s epigraph.