Being More Accessible to People With Disabilities:

A Review of the Township of North Stormont's Website

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Acknowledgements

A special thank you to the Townships of South Stormont and Loyalist for allowing us to review their websites for this report. It should be noted that Loyalist Township is launching their new website on September 8th, 2020. Therefore, the recommendations and notes made about their website may need to be updated in a future report to see whether the same issues persist or if the issues were rectified. This also includes any potential encouraging or innovative changes they may have made to improve their website to make it more accessible.

Introduction

North Stormont (NS) is working towards fulfilling their accessibility obligations as set out in the Accessibility for Ontarians with Disabilities Act, (AODA) to ensure all North Stormont buildings and services fully comply with this act. One of the areas being reviewed is the Township's website. It is easy to say a website complies with the Act, but until people with visual impairments use the website it is difficult for the average person to know what to implement when it comes to increasing accessibility on municipal websites.

The visually impaired rely on screen readers or braille devices to read and navigate the internet. There are two main screen readers that are relied upon by the visually impaired. Apple product users use **Voiceover** for their internet access. Whereas, PC users rely on a program called **Jaws** to navigate the internet.

As North Stormont Township's accessibility consultant, I will provide my observations in the following areas:

- Areas that are accessible when using NS's website
- Reading budget documents
- The layout of South Stormont Township and Loyalist Township's website
- Training programs for employees of North Stormont
- Reading reports from all three websites
- News pages
- Comparisons when using Voiceover versus Jaws
- What improvements can be made for the colour blind people
- What improvements are needed for people who are deaf or hard of hearing
- A checklist for ensuring future zoom meetings are accessible

- Recommendations, considerations, and changes North Stormont might consider improving its website's accessibility.

Navigating North Stormont's Website

Overall, North Stormont's website is well structured for the visually impaired. The Municipal Department pages are well organized and easy to navigate. All departments outline what to expect when navigating the page. All departments have a variety of different sections that says, "same page."

The garbage and recycling page; clicking on this page there is information on the following:

- The collection schedule for all areas throughout the Township;
- What items are and are not acceptable for recycling;
- Search options on what can be recycled in the Township;
- The page provides a teaching opportunity on how to dispose of waste responsibly

The council meetings and agendas page has significantly improved its accessibility since first visiting this page. All users can find out what was discussed while the council was in session, and it is easy to find out when the meeting is scheduled. If anyone has challenges navigating the Township's calendar page there is a separate page that contains a word file with dates for all 2019 and 2020 council meetings.

No changes to these areas are necessary.

Budget documents

If budget information is located in a by-law, there are some issues.

There are no issues with reading and understanding the by-law's context, but when reviewing the budget itself it is difficult to understand the table. When using Voiceover or Jaws the user experience is different. Voiceover users should have no problems reading budget documents. Jaws users will have a much harder time understanding the information. Everything is located in one row and this makes it more challenging. When listening to Jaws read out the information, since the information is in one entire row it makes it difficult to differentiate the information.

Navigating South Stormont and Loyalist Township Websites

Both South Stormont and Loyalist Township Websites are well designed. There are things I liked that North Stormont could do to enhance the user experience and some that do not need to be considered from an accessibility perspective.

South Stormont Township's site was good for the following reasons:

- There was access to their library's website;
- Some documents were easier to locate, such as burn permit applications;
- All COVID-19 information was located in a separate link;
- They describe what is in the picture; and
- It has a reliable system for listening to council meetings.

If North Stormont chooses to use a similar system, there should be no issues for both Voiceover and Jaws users.

Loyalist Township's site was good for the following reasons:

- Addresses and contact information for all school boards are on the education page;
- There is contact information for accessing the Township's library;
- Community grant applications are available; and
- All community news had no PDF files.

It is unclear whether forms can be completed online or not.

News Pages

In most circumstances, there were not many issues reading North Stormont, South Stormont, or Loyalist Township's news pages. In one instance for North Stormont, it was difficult to understand the information in "government announced supports," which was not an accessible link to access. When scrolling through the PDF file, you cannot access the links in the file.

Reports

Most reports that I have read from North Stormont's site are very good. However, in some cases, the context of some reports are difficult to understand. When reading the Integrity Commissioner's latest report, there were challenges with understanding parts of the text. The following examples were the most commonly misunderstood words:

- Both words 'preliminary' and 'review' are joined;
- 'Finding' and 'A' are joined;
- 'Allegation' and 'behavior' are not separated by a space;
- 'Investigation' and 'to' have no space;
- "Finding of" are both not separated by a space;
- 'Municipality' and 'is' are not separated by a space;
- 'Unwilling host' and 'for' are not separated by a space;
- Council with a comma and even are joined together; and
- Confusion with wording after the decision.

Jaws and Voiceover can make out some words but only if you scroll word-by-word. Anyone who uses a braille device will be able to understand this report because you can pick out what was said.
When reviewing South Stormont's "reports" page, a separate link was created to view the information. There were not many reports to read on their site, primarily because the site was launched on July 8, 2020.

When reviewing Loyalist Township's 2019 staff report, dated November 4, 2019, there were no issues found while reading it.

Challenges with the Other Township Websites

South Stormont

South Stormont's website has a lot of good things to ensure their website is accessible. While South Stormont's site is mostly user friendly, there are a few issues.

When navigating South Stormont's website with Voiceover, all links are easy to find. If I access their site with Jaws, it does not provide similar information. For example, one link provides all information related to COVID-19 information. With Voiceover this link can be located, but when using Jaws this link could not be found. When using either screen reader, there is one big difference; when navigating between applications with Voiceover it works fine, but with Jaws, a cookie message pops up on the screen which moves the cursor to the bottom of the page.

South Stormont's website was launched July 8, 2020 and we have been advised that they are still in the process of completing the accessibility review of their new website with their provider.

Loyalist Township

When navigating Loyalist Township's website with a Mac, Voiceover users can only fill out one form independently. Even though Voiceover users cannot complete the form independently, you can review what information is needed per form. Anyone who lives with a disability can contact the Township office for assistance, but I suggest reviewing the form, so you are certain that option is available. Jaws users have the option to download the form, but it is still not accessible. When reviewing the Township's 2020 calendar file, it is easy to understand the event, but it is confusing to understand when the event is scheduled to take place. This occurs with both Voiceover and Jaws.

Training

AODA Customer Service

The Accessibility for Ontarians with Disabilities Act, (AODA), meets the requirements for completing this course. In fact, there is only one barrier from completing the course independently; sometimes users are forced to re-enter their user information. While there are no problems finding the training courses, it can be difficult to continue taking the course.

Workplace Hazardous Materials Information System

In terms of learning WHMIS, there were some barriers. There were occasions when the user needs to re-enter their user information but can continue from the previous spot. Before the Township hires new employees, anything relating to the pictogram content will need to be changed; the symbols could be explained, the quiz has too many barriers that make it difficult to complete independently. For instance, images are not described during the training which leads to confusion on how to complete the quiz.

Introduction to Bill 132 Training

The Introduction to Bill 132 training has similar problems to the AODA customer training course.

Workplace Violence and Harassment Training for Employees (Ontario)

This course was the easiest to navigate. However, if a user had to re-enter their user information, then similar barriers experienced in previous training courses will occur.

Other Notable Information

While there were problems with completing the training courses, the platform failed to adequately explain how many characters were required to create passwords. This created a barrier that should be addressed before hiring employees with disabilities.

Website Feedback from a Colour Blind user

Even though there are different visual impairments, there are those who have major visual impairment problems, and there some who have minor visual impairments. One of those groups includes those who struggle with seeing colours also known as colour blindness. When I was working on the report, I spent some time investigating this issue.

For the colour blind community, the website itself is well done. Based on the feedback I received, the maps section was easy to navigate and identify directions to different areas of the Township. The welcome message is written in all caps which makes it difficult to differentiate the message. There is a problem identifying the colours from the last two headings on the home page. (They are the last two headings on the site; "Our newsletter is coming" and "Townhall Address.")

It was difficult to differentiate among the municipal department links. The middle and background colours were fine, but there were a variety of different green colours. There was some trouble distinguishing lighter or darker backgrounds. The Township could consider avoiding using similar colours of lightness. Another problem for people who struggle with identifying different colours are:

- The red/green confusion; and
- The use of tinted or coloured text on a slightly darker background.

The same problem exists on all screens and paper-based documents, or even when using technology to use the internet.

Mobile devices

When using an iPad or iPhone, there were problems reading the information. Any user who experiences this issue should hold their device horizontally to read the information.

With regards to accessing different links on the home page, a message is needed to direct users to access the site menu to find the information.

Recommendations

With regards to the above points, North Stormont should make the following changes:

- Provide contact information for the Township Libraries;
- Remove the schoolboard links and provide contact and each board's URL;
- Copy information from PDF letters from the province or local organizations for Township news;
- Consider preparing budget documents in excel file for anyone who struggles reading any future budget documents
- Check PDF reports to identify if any words are joined together;
- Consider adding contact information for disability assistance after regular hours;
- Sharing links must be placed below the information or at the bottom of the page;
- Make light colours lighter and dark colours darker
- Add a separate link for COVID-19 information.

Workplace Training Recommendations

- Put pictogram content at the end of the course;
- Describe the images for pictogram quiz;
- Outline how many characters
  are required when creating passwords;
- Ensure a screen reader can read this information;
- Make resume buttons easy to locate for screen readers in AODA Customer Service, Introduction to Bill 132 Training, and Workplace Violence Training for Employees (Ontario);
- Find out why users are timed out when completing courses;
- Make resume buttons within training similar to those found in WHMIS training.

Deaf or Hard of Hearing Website Experience

Sometimes it can be difficult to hear what people are saying. Before describing how the deaf community uses the internet, consider;

There are three ways that people who are deaf identify themselves:

- **Deaf**: Those who identify as Deaf (with a capital D) communicate with American Sign Language (ASL). These are often those who have been deaf for most of their lives.
- **deaf**: The lowercase d is for those who do not identify as part of the Deaf culture. These can include those who became deaf later in life.
- **Hard of hearing (HoH)**: This describes those who have some hearing loss, but not complete hearing loss.

If the township is going to improve their website for the Deaf or Hard of Hearing community will need the following improvements:

- Accurate Captions;
- Transcripts;
- Ensure e-mail addresses are available for anyone who struggles hearing properly by phone;
- High-quality clear audio with minimal background noise; and
- Use of clear and simple language.

The above list describes the major areas of focus for the deaf community. The last two items on the list are the most important for this community.

The use of clear and simple language relates to people who use American Sign Language (ASL). Since ASL has its own grammar structure, not everyone who uses it will be fluent in English. The following list will assist the Township in this area:

- Avoid slang or any confusing language;
- Use headings and subheadings to properly structure your content;
- Include bulleted lists;
- Provide definitions and simple terms;
- Use an active voice; and
- Use consistent language throughout the site.

In terms of high-quality audio, The Township could ensure that everyone can adjust to using their microphones properly; all microphones are on at all times. If members of council speak away from their microphones, do it

briefly. Going forward, if future council meetings are held by Zoom, there are two things to help the deaf community. First, all speakers' cameras must be turned on because some Deaf or Hard of Hearing users read lips. When a Deaf or Hard of Hearing individual reads a person's lips, they must be able to see their lips.

In terms, of the first two items on the above list, I recommend that the Township contacts Canadian Hearing Services for any accessibility consulting services. Businesses who need assistance in this area should get in touch.

COVID-19 has completely changed society. Before COVID-19 arrived in Canada, there were no limits on crowded spaces or how many people we interacted with. While the entire country was in lockdown, society began attending Zoom meetings or the like which exposed another possible barrier for people with disabilities.

Below is a list of suggestions Council might consider for future meetings:

1. Is the platform accessible?

2. Do you have text captioning sign language interpreter available?

3. Is the material being made accessible to all?

4. Have you asked invited participants which type of accessibility they need?

5. Will speakers have their cameras on?

6. Is there adequate lighting on the person speaking?

7. Are presenters using virtual backgrounds?

8. Are presenters wearing dark colours?

Appendix A "Why Color Blindness is No Longer a Problem for Web Design"

(https://www.templatemonster.com/blog/designing-colorblind-friendly-website/)

Color blindness is a slight inability to distinguish colors. This can be a real drawback for anyone in the design field since the color theory is a basic feature of a successful design, and lots of decisions are based on the feeling and emotions derived from design decisions.

Have you ever considered color blindness when designing a UI? Well, even if not here are some useful tips that will help produce a colorblind-friendly website.

It is remarkable that approximately 8% of all Caucasian males and 0.5% of females experience problems with some forms of color deficiency, and it means that 1 of 20 users may not be able to see your website in its full beauty. For these viewers the text may be fuzzy and images may be unrecognizable.

When designing a web page or any other UI, it's really hard to take into consideration the special needs of these people. Below you can see the **web designer's Color Card** with a color scheme that visualizes how people with some sort of color blindness experience colors. Judging by the scheme, we can see how color vision deficiency causes individuals to confuse reds and greens.

VisiBone

Color Card

Here are the 216 colors most widely supported by web browsers.

Colors are grouped by hue.
Touching color chips have the same hue.

This figure emulates deuteranopia, one of many forms of color blindness. Color blindness affects about 1 in 12 men and 1 in 250 women.

hexadecimal HTML
decimal RGB
www.visibone.com/color

Normal vision is trichromatic, it means that most of us can match any color or tone by a mixture of three primary colors (red, green and blue). Dichromats (people with color deficit) can match colors by a mixture of two colors. The above-featured inset visualizes how people with color deficit in this case red-green defect experience the colors and tones.

Tips for Designing Colorblind-Friendly Content

When designing web content that is friendly for color blinded people there is no need to transform all images into black and white, you may do just some slight adjustments by following several tips.

It is highly important! You need to be sure that colors you use do not convey important information.

As a rule, when the picture is uploaded onto the web its color does not really matter for the user, everyone will understand the image and its visual message if it is presented in full color or black and white. If it's very important to provide some information with a specific image, it is necessary to use other means that would deliver this information. A good example is a map of London Underground where the routes are distinguished in color. For color blinded people it is very hard to differentiate one route from another (with these two examples taken), that is why it's very important to use other means to de ne those routes.
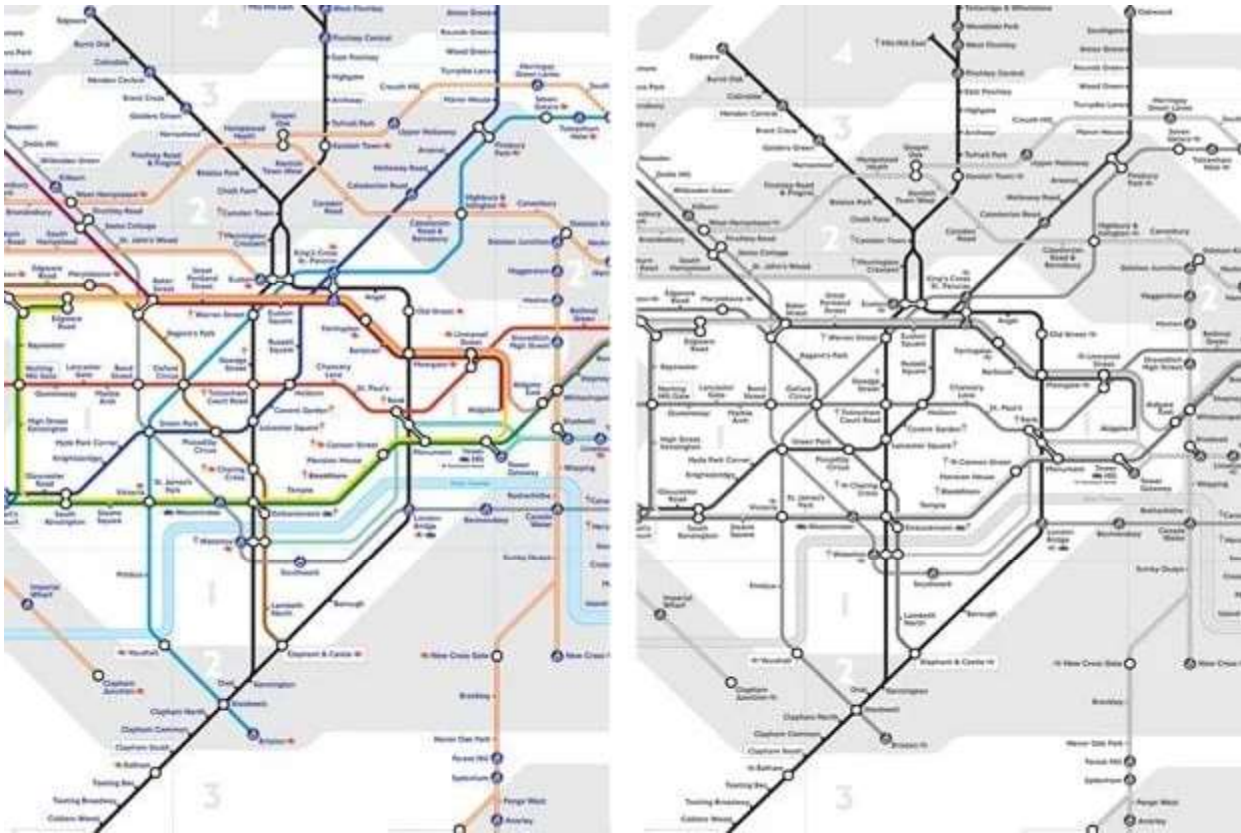
Extra approaches to differentiate colors may be useful not only for color blinded people: those who are blind may also experience problems with color reproduction and need extra cues to distinguish colors.

Color-sighted people also interpret colors differently. Color is a matter of perception that is why you will not be able to make everyone see the same colors as you see them.

How does impaired vision affect color perception?

There are hundreds of factors that influence our eyesight to mix up colors. Two colors with sharp contrast may be less distinguishable for people with some sorts of visual disorder. When producing various UIs designer needs to keep in mind that contrast between colors makes them more or less discernible rather than the individual colors themselves
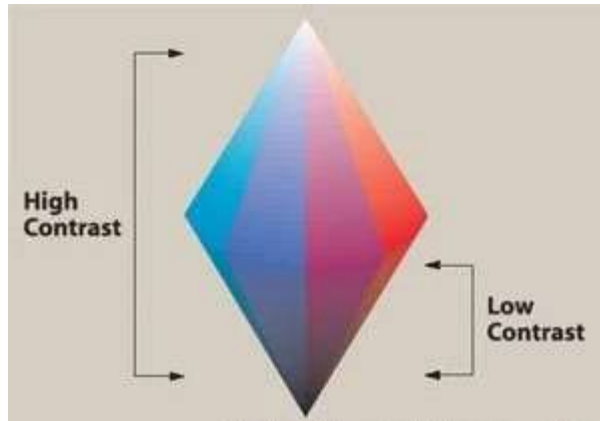
- You need to exaggerate the difference between the foreground and the background and avoid using colors with similar lightness no matter how they differ in saturation or tone.
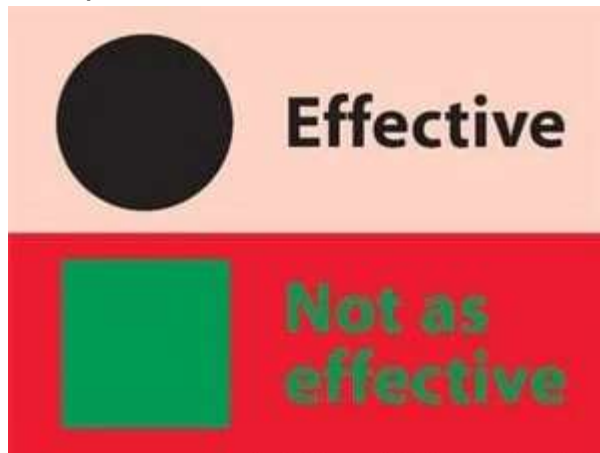

- It is wrong to think that the lightness of the images you embrace will be the same for people with color de cit. So, if you lighten light colors and darken the dark ones, you will increase its visual accessibility.

- This diagram shows why it is preferable to choose dark colors with hues from the lower half and light colors from the upper half. It is essential to avoid making the contrast between light colors from the bottom half against dark colors from the top half.
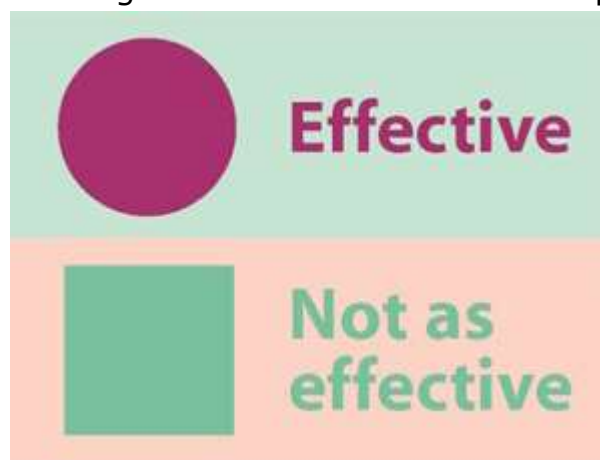
- The color blindness effect makes the colors on the bottom part not so effective comparing with the colors from the upper part.
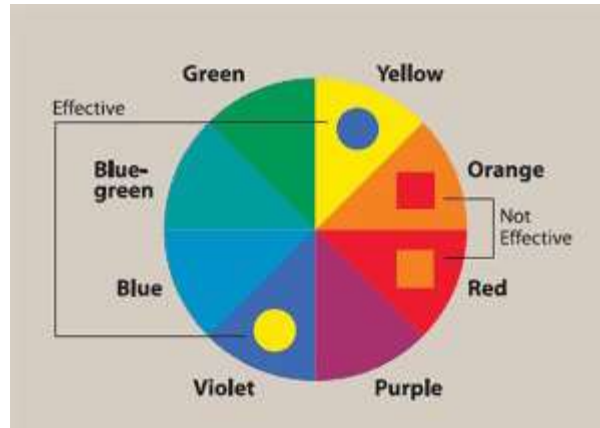
- You need to avoid using the contrasting hues from the adjoined parts of the circle if those colors do not contrast in lightness.

- Color blindness or partial inability to differentiate colors makes it harder to define the hues of a similar color.

Making a suitable design for all forms of color blindness can be very dif cult. If you keep in mind the following basic perceptions of color, you can create UI that would t people with color de cit. So **hue**, **saturation** and **lightness** can determine color perception:

- Hue is the spectral wavelength, represented by the outside edge of a color wheel (red, orange, yellow, green, blue, violet);
- Saturation is the scale from grey at the center of the color wheel to the pure vivid color at the edge, sometimes called shade;

- Lightness is the level of darkness or lightness, sometimes called tint;
- Hue<, saturation and lightness are the main attributes of color that can be defined as a whole.

Hue varies around the lightness and varies from top to bottom; saturation is a distance from the center. Hue is an attribute which is associated with the main color names. It allows us to de ne main color categories (blue, green, yellow, red and purple). The normal color vision allows to de ne hues one to another according to their similarity and on the contrary color blindness lessens the ability to follow the correspondence of those hues.

Lightness is an amount of light reflected from a specific object in correspondence with nearby objects. This color attribute is purely perceptual and makes the contrast more effective. Color blindness diminishes the ability to de ne color on the basis of lightness. Color blindness makes the person see the left part of this image as the one with normal color vision sees the right part. Because of the color blindness people are not able to differentiate colors on the basis of these three attributes (hue, lightness and saturation). Web designers can diminish this deficit by increasing the difference between those attributes.

Is There Any Solution for Color Blind Users?

Since there is no special treatment of color blindness, except for the color eyeglasses or lenses that could improve and sharpen person's recognition of colors, there's special software that allows to adjust your monitor picture according to your special needs. Here is **Visolve**, the software produced for people with color deficit.

Visolve allows to transform colors on the computer or an iPhone display into the corresponding colors. This software helps people with color blindness to see a normal color and to feel the color changes according to the scenery.

Visolve executes following color transformations:

- Red – Green transformation, makes reds brighter, and greens darker;
- Blue-Yellow transformation, makes blues brighter, yellows darker;
- Increases saturation;
- Filters – darkens all colors other than the specified color;
- Hatches – draws different hatch patterns depending on the color.

When people with color blindness use this software and apply, for example Red-Green transformation while keeping in mind the color changes, they can easily guess a normal color. By the way, Red-Green transformation reflects the degree of color saturation into its brightness meaning that colorblind people can see not only the difference between red and green but also the difference between two reds (the degrees of red).

Chances are that some people are color-blind, but aren't even aware of it. So, it may be useful to pass several **color blindness tests** for you to and out whether or not you experience color differentiation problems.

Concluding everything said above, you need to keep in mind that it's really easy to make a colorblind-friendly website/UI. You need to put a conscious effort where it affects the way how the site works or when color perception can impair the text readability. Make sure that when it matters with links, charts or games, you look for ways to add contrast.

Use highly contrasting colors, implement patterns, apply symbols, and use tricks with strokes, shadows and make sure there is significant visual difference in all the right places. It can be really helpful to use **color blindness simulator** to see how this or that design decision may affect overall experience.

Plus keeping in mind these tips you will create a color blind-friendly UI.
- Do not use colors to convey important information;
- Increase contrast between similar colors;
- Lighten light colors and darken the dark ones;
- Increase saturation of colors; and
- Use patterns, symbols and strokes.

Appendix B "Understanding Assistive Technology: How Does a Deaf or Hard of Hearing Person Use Technology?"

(https://www.levelaccess.com/understanding-assistive-technology-how-does-a-deaf-or-hard-of-hearing-person-use-technology/)

Understanding digital accessibility challenges is easy if you know people with disabilities. But what if you've never seen a person who is blind use their computer or smartphone? We're here to help you understand a little bit about what it's like to use the internet if you have a disability. Check out our previous two articles in this series:

- How Does a Blind Person Use the Internet? (https://www.levelaccess.com/understanding-assistive-technology-how-does-ablind-person-use-the-internet/)
- How Do Legally Blind and Low Vision People Use the Internet? (https://www.levelaccess.com/understanding-assistive-technology-how-do-legallyblind-people-and-others-with-low-vision-use-the-internet/)

Today, we are focusing on people who are d/Deaf or hard of hearing.

What do we mean by "d/Deaf" or "hard of hearing"?

According to the National Association of the Deaf (NAD),"How people "label" or identify themselves is personal and may reflect identification with the deaf and hard of hearing community, the degree to which they can hear, or the relative age of onset." You can read the full descriptions on their website (https://www.nad.org/resources/americansign-language/community-and-culture-frequently-asked-questions/), but here's what you need to know:

- Deaf: Those who identify as Deaf (with a capital D) communicate with sign language. These are often those who have been deaf for most of their lives.
- deaf: The lowercase d is for those who do not identify as part of the Deaf culture. These can include those who became deaf later in life.
- Hard of hearing (HoH): This describes those who have some hearing loss, but not complete hearing loss.

Beyond captions: Assistive technology for Deaf/HoH users

Alerting devices

An alerting device converts an audio alert (e.g., doorbell, re alarm, alarm clock) into a visual or physical alert that the person can perceive.

Telecommunications

Many different options are available for those who are d/Deaf or HoH, including amplified telephones, TTY / TDD (software and hardware), real-time text (RTT), captioned telephones, Text-to-911 (https://www.levelaccess.com/text-911-now-available-los-angelescounty-enabling-hearing-speech-impaired/), video chat, and text and video relay services.

Enhanced/Assistive listening

Systems can be used to overcome background noise and provide a more direct audio feed for someone who uses assistive listening devices.

For example:

- In a classroom, a teacher could wear a small microphone that uses an FM radio system to transmit audio to a student's hearing aid.
- In a theater, an infrared or audio induction loop system can be used so that audience members with hearing impairments can hear the play through their hearing aids or cochlear implants.
- At work, an employee can couple their cochlear implant or hearing aids with their computer via Bluetooth and hear their computer's audio without needing headphones.

Accessibility barriers for d/Deaf/HoH users

Here are some accessibility issues that restrict access to people who are d/Deaf/HoH:

Inaccurate captions

Without captions, it can be difficult or impossible to follow what is happening on screen. While some people can read lips, unless the speaker is facing straight at the camera the entire time, it's not feasible for a video. (Also, it's way more work!)

When captions are missing content, have incorrect words, or are missing important details (such as clarifying which person is speaking or noting important sounds) they do not provide an equivalent experience for someone who is d/Deaf/HoH.

Automated captions are a blessing and a curse for those with hearing impairments. It can be great to have captions, but AI is far from perfect and sometimes automated captions are worse than no captions at all.

In a freeze frame from a video, a little girl covers her looks surprised. The automated caption reads, "what's your fraud

Captions that are not synchronized properly

If you have ever experienced lag while streaming video and had the actor's mouth not match up to their words, you know how annoying it is when the visual and audio tracks are not in sync. As the equivalent to audio, captions should also be in sync with the video.

No transcripts

Podcasts have exploded in popularity in recent years, but not many of them provide transcripts for those who need them. The same goes for webinars: do you offer a transcript along with your slides and recording? A true transcript includes details about the speaker and other important auditory content.

Phone-only customer support

Nothing is more frustrating than trying to contact a business and finding out the only option to do so is a phone number. While the telecommunications relay service (TRS) is available through each state, many people prefer to communicate in different ways that better suit their needs.

Low-quality audio

Low-quality audio will result in inaccurate captions or additional work on your end to ll in the blanks where the transcriptionist couldn't make out the words. If you don't have captions at all, the audio will be even more difficult for someone who is hard of hearing to understand if the background noise is competing with the speaker.

The Good Life: What an Accessible Site Looks Like

We went to our friends at 3Play Media (https://www.3playmedia.com) to ask what a best in-class experience would be for someone who is d/Deaf/HoH. Here's what Elisa Edelberg of 3Play told us:

Accurate Captions

- Captions allow viewers who are deaf or hard of hearing to follow the dialogue and the action of a program simultaneously.
- It's critical that captions are accurate and also include non-speech elements, otherwise the content may be incorrect, incomprehensible, or incomplete

Transcripts

- Providing a transcript is another great way for deaf or hard of hearing users to follow along and have another means of consuming the content. (However, transcripts should not be used as a replacement for captions!)

Multiple methods of contact and communication

- Deaf and hard of hearing visitors may have a difficult time communicating over the phone. Providing an email address, or alternative means of contact will help.

High-quality, clear audio with minimal background noise

- Quality audio will make it easier to ensure accurate captions. Poor audio quality makes it harder for transcribers to capture all the words spoken, leading to transcripts with many [inaudible] or lagged spots.
- Clear and high-quality audio will also be easier for hard of hearing users to understand more clearly.

Use of clear and simple language

- American Sign Language (ASL) is a different language than English, and it has its own grammar structure. Individuals who use ASL as their primary language may not be fluent in English, so making written content clear and simple to understand is important, and can be done in the following ways:
  - Avoid slang and confusing jargon
  - Use headings and subheadings to properly structure your content
  - Include bulleted lists
  - Employ an active, rather than passive, voice
  - Provide definitions in simple terms
  - Use consistent language throughout content

Appendix C "Are Your Virtual Meetings Accessible for People with Disabilities? Start with This Checklist."

(https://barrierfreecanada.org/are-your-virtual-meetings-accessible-for-people-with-disabilities-start-with-this-checklist/)

The COVID-19 pandemic has changed the way humans interact with one another. With an emphasis on less physical interaction and more social distancing, institutions and organizations

People with disabilities form about 15 percent of world population, so it is all the more important these online meetings are made accessible.

The way we design and build can make it hard – and sometimes impossible – for people with disabilities to access services and information delivered by our digital products. Accessibility is the practice of designing so that all people, regardless of physical or cognitive ability, can use products successfully.

There are many different kinds of disabilities, but for the purposes of web accessibility, the most relevant types are those that affect the eyes, ears, hands, and brain. (Some examples include visual disabilities, deafness, visual disabilities and deafness, physical disabilities, and cognitive disabilities.)

All of these disabilities affect interactions with digital products and services in different ways. People need to consider accessibility any time they communicate information digitally. Accessibility is not just a concern for websites, apps, and social media. It needs to be front and center for all digital products, whether they are PDFs, PowerPoint presentations, or even virtual events. For virtual meetings and webcasts, it is important to choose a platform that supports accessibility for people that have mobility, vision, hearing, and cognitive disabilities.

Before you host your meeting, you should think about the following:

- Is the platform accessible? Some remote participation tools present accessibility barriers that make them unusable by people with disabilities and incompatible with assistive technologies.
- Do you have text captioning or sign language interpretations available?
- Is the material being shown accessible to all? People with vision impairments use a screen reader and cannot see a shared screen or a video. Make all materials available beforehand or provide a link to them in the chat.
- Have you asked invited participants which type of accessibility they need?
- You can include this question on the registration form.
- Will speakers have their cameras on? This enables people who are lip readers follow along.
- Is their adequate lighting on the person speaking? People who read lips need to be able to see the person's lips.
- Are presenters using virtual backgrounds? When people use pictures as a virtual background, it can wash away their face.
- Are presenters wearing dark colors? Suggest that speakers wear dark-colored clothes so the contrast will be high. Otherwise the lighting on light colors washes out people's faces.

The Accessibility SIG advocates for an accessibility-first approach to design and development. This means accessibility is not something that should be tacked on just before you launch. It should be a key consideration from the very start.

The first step is adopting the Web Content Accessibility Guidelines, also known as WCAG. These guidelines, put together by the World Wide Web Consortium (W3C), outline the development, design, and content standards products must satisfy in order to be fully accessible. The WCAG guidelines have three levels: A, AA, and AAA. A has the fewest requirements to satisfy, while AAA has the most. The Internet Society is looking to meet the level AA standards, which means that it must also meet the level A standards.

The following guides and checklists were created by NYC Government as an aid to other NYC agencies in creating accessible content. We thought they were extremely helpful and recommend using them:

Web Accessibility Checklist
Accessible Social Media Guide Accessible Slide decks Guide
Accessible Documents Guide
Accessible Virtual Meetings Guide
Audio Description and Captioning Guide

Among other factors in the domain of Internet and digital accessibility, a lot depends upon the technical community and developers. So, if you are a developer, and developing a device or a website, you need to ensure that your digital product doesn't prevent over one billion of world's population to access or use it. We encourage everyone to adopt accessibility practices when creating any digital content. This includes websites, electronic documents, presentations, videos, social media posts, or online meetings!