Event: BLH Training Mobile Accessibility Overview

Org: AccessGA - CIDI

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JOHAN: I have the honor of presenting with John Toles. This will be one of 2 trainings on mobile accessibility. This is more of an overview and next week we will go into a bit more detail about actually testing on mobile as well. If you have attended any of these trainings, this will sound familiar. We have our captioner here today. There are 2 ways in which you can access the captions. One is through the closed captions options on the Zoom toolbar. Also the live transcript link is available in the chat there is a bit more flexibility with stream text application when accessing captions.

CIDI is located at Georgia Tech in the College of Design. We provide a number of different services as you are probably familiar with already. Digital accessibility. John Toles and I work closely together on a lot of the initiatives in the trainings and the technical assistance and evaluations. We provide a number of other services for higher ed institutions, state agencies, federal agencies, for-profit businesses. We do some international work as well. Pretty much everything we touch is related to disability awareness. Disability services and digital accessibility.

The goals for today's session. On completion of the webinar, participants will be able to: Have a basic familiarity with the screen reader solutions available within the iOs and Android platform. Identify two accessibility features within the iOs and android platform that assist people with disabilities. Identified two resources available to increase familiarity with screen reading technology.

I am going to ask everyone to please put yourself on mute. I do hear an open mic. Let me introduce John Toles. A lot of emails went out today and it is his five-year anniversary at CIDI. We are fortunate to have him employed with us. He wears a number of different hats at CIDI including customer support with the customer support team. He is the resident Drupal expert. He does a lot of trainings and technical assistance and web accessibility evaluations. As I said we are very fortunate to have him. I learned from him all the time. Then you all know about me. I do not need to repeat the instructions for me.

So when we talk about mobile, it is often confusing of what is mobile. Obviously we think of a mobile phone. But mobile is really portability and versatility. Car interfaces can be included under this. We typically think of phones and tablets. But certainly car interfaces are becoming much more interactive. Also video game controllers.

When I was younger they were nearly as powerful as they are now. Most allow you access to the Internet via a web browser. Multiple features beyond just video games. Gaming is a multibillion-dollar industry. Very often the gaming industry pushes the graphics and the hardware capabilities. It is very much an active role in the area of mobile accessibility.

Wearables. We had a company come out to Georgia Tech called haptics. Spelled HAPTX. They provided a glove that simulates virtual touch and movement. Coupled with a headset. When we talk about mobile, they can also take into consideration things like wearables. This is an area that hits home for me on a personal level.

I have a vision impairment. I am legally blind in a have a lot of functional vision but this is where a lot of the testing really needs to take place. There is very little testing done with headsets. Who are you testing for? Someone who is blind? Somebody with low vision like me? There is a lot to consider.

The emerging market of the Internet of Things. We have various devices that interface with the Internet. The web of things. More and more there are products and services that interact with one another. Simply using the web as a conduit. As per usual, the standards and guidelines are not keeping up with the technology.

It is interesting the HAPTX company; they work with the car manufacturers as well. One example is testing before the car manufacturers even design a product, creating a virtual environment in order to test for usability and for aesthetics, etc. These emerging technologies are going to continue to increase. That is really going to shift the focus and perspective on accessibility as well.

For any of you that have questions or comments, please do not hesitate to drop them into the chat. We want to hear from you. I always prefer to have a dialogue rather than a monologue. When we talk about apps we provided the presentation a while back on social media. Very often that is apps and very often on smartphones or on tablets. When we talk about apps there are three broad categories you can drop them into.

Native app is a primary access point that does not rely on a web browser specifically. It may rely upon the Internet but not necessarily requires a web browser to be open. Then there is hybrid apps. Simplify browsers within an app that accesses web content. However some of that is built out as more of a typical app that you would see. Then there is simply the web apps. That is basically just using an icon or a link to launch into the specific preferably mobile friendly web-based application or website itself.

Keep in mind, this presentation is really more about the content that you are going to be creating and uploading for your particular purposes. The social media app is really about the specific application such as Facebook or Instagram, etc. But this is really related to the content you may create or push out the actual content itself or the website for instance.

Mobile is more important than ever. It is interesting. You would think the screens are getting larger and larger as we access content . And that is the case with a lot of TVs that are getting larger and less expensive. But the majority of traffic on the Internet these days is mobile. I have the largest iPhone possible that is the iPhone 13 Pro Max.

Diagonally, it is just over 6.5 inches in screen size. That is so small. I use the zoom feature all the time in the built in VoiceOver screen reader. That is what a lot of individuals are contending with. Their trading in the larger screen for portability. When we talk about mobile accessibility it benefits everyone across the board.

The gentleman on the top left is straining to hear but the noisy traffic in the background. It is interesting that text messaging really resulted out of the need of individuals who are deaf. The gentleman who developed that in Europe was not thinking of it as a mainstream solution. But it quickly has been. We do not think of text messages as actually being accessible necessarily but it certainly is for certain individuals with disabilities.

The woman on the top right is holding a child and is multitasking. We can think of reach on a mobile device may be for somebody with limited dexterity or reach capabilities. She may also use speech to text and text to speech for accessing that phone . If she is busy with her child and trying to multitask.

On the bottom left, we have all experienced this. The color bleed that takes place on a bright sunny day. Once again this is where contrast really helps for everybody across-the-board. Then I cannot tell you, on the bottom right I cannot tell you how many individuals I showed accessibility features with on iOs and Android .

At the age of around 50 we had presbyopia happening where the muscles around the lens and the lens itself loses its elasticity. That is where presbyopia takes place. We need to pull away from a device in order to find the optimal focal point. Once again we will all experienced this at some point in our lives if we live long enough.

Limited dexterity, mobility, visual impairment, greater sensitivity to glare. When we talk about mobile accessibility, it is not just for individuals in a box that we call disabled. It is really across-the-board and across the spectrum. Depending upon where we are in our lives, the different phases in life. Where it is temporary or permanent disability, we will all benefit on some level with accessibility.

So really we have 2 major platforms to consider when it comes to primarily smartphones and tablets. The first is Apple iOS. It is wildly popular in the United States. This is an updated statistic from January 2022. IOs in the US has 59.87% of the market. And Android including Samsung as well, we are looking at 39.81%.

Then the remaining is less than 1% which includes Samsung proprietary OS . Also KaiOS which is more popular in Hong Kong and China . But even out there, it is not wildly popular. Then Windows is pretty much dead in the water. Microsoft made a valiant effort at it but it just did not take off.

Worldwide, iOs is not nearly as popular as it is in the US. This is really a consideration to take in when you are thinking of your target audience. Probably for the majority, your target audience is the US. But if you're looking internationally, these are some statistics to consider. IOs is only 29.49% and Android is 69.7% really popular.

There are probably multiple reasons for this one being the cost. We are in an affluent society in the United States. We are addictive consumers. Android is less expensive. Generally. Once again, less than 1% includes Samsung protect proprietary operating system and KaiOS. The source for this is StatCounter.

When you think of what devices to test on and which platforms to use, you can obviously look at your analytics and determine that from that perspective as well. Knowing these brought analytics will be useful. Also, I will mention, the iOS platform is very popular and very much sought after in the disability communities for multiple reasons.

One being have the advantage which John will talk about a bit, the integrated hardware and software. There is a lot more stability and accessibility for individuals with disabilities. Hope I did not rain on your parade John! I just had to mention that.

Legal landscape. A lot of people are confused. Does the legal landscape include mobile or not? I will talk about a precedent-setting case where mobile apps are included. I will talk about the rapid changes and developments that take place. Then challenges with technology, testing and accessibility.

Standards and guidelines. You have probably heard a lot about WCAG 2.0 and 2.1 if you said in on previous trainings. The Revised Section 508 also known as ICT refreshed. Also the Americans with Disabilities Act although there is virtually nothing in the ADA that references digital accessibility let alone mobile accessibility since the ADA was signed in 1990, once again it refers to the spirit of the law. These days more and more if the majority of your traffic is on mobile, individuals with disabilities are being put at a disadvantage if that content and those platforms are not accessible.

CVAA is a 21st-Century Communications Act. This refers to streaming of multimedia content and is accessibility as well. The ADA based website accessibility lawsuits. Keep in mind that this is not just with mobile but across-the-board. In 2021, there were 2352 web accessibility lawsuits against US businesses. This was a 14.3% increase from 2020. Part of this may be really driven to the fact that a lot of us relied so heavily upon digital content more than ever before during the pandemic. The sources from accessbility.com.

High-profile settlements. Keep in mind, these references here are not necessarily lawsuits. Their settlements. Department of justice settlements. I am not seeing it on my screen. Okay I think it is the next slide. High-profile settlements. These will often require WCAG 2.1 and 2.0 depending on the particular settlement. Web accessibility includes captioning, mobile accessibility, and then with the settlements, they do not just look at the website or the mobile applications. They really want to look at a strategic accessibility roadmap. They require a web accessibility coordinator be appointed. And a web accessibility policy be adopted.

You really want to avoid the settlement into it on your own time as much as possible rather than being reactionary, being proactive. These are some examples of settlements. I have a source LFlegal.com. Laney Feingold is one of the leading accessibility attorneys in the country. Have a great deal of respect for her. If you have not already highly recommend you check out her website. LFlegal.com.

Her method is what she has developed as structured negotiations. It really is a lot of what we talked about throughout including people with disabilities throughout the design development stage at the decision-making table. A lot of the settlements are the ones in which she has negotiated with consumer groups such as American Council for the Blind, for instance. Actually setting up conversations and basically a mediation kind of process rather than having it escalate to an actual lawsuit.

If you think of the amount of money that goes into lawsuits and attorneys and going back and forth, all of that money really could be invested in actually making the products and services more accessible. This is what Laney Feingold perspective is the way in which she approaches this.

Some concrete examples of some successful settlements that have taken place. Albertson's Digital Accessibility Settlement Agreement. They had a settlement in 2019 that required WCAG 2.0. Also Patreon Digital Accessibility Settlement Agreement in 2020. Patreon is designed for artists in the digital environment. There settlement required WCAG 2.1.

You may recall that we talked about Section 508, that is really WCAG 2.0 Level AA. This is a settlement that required 2.1. Discord Digital Accessibility Settlement Agreement. In 2021, this was a platform that allows for chat and networking and teams. This was a settlement that took place that also required WCAG 2.1 Level AA. WCAG 2.1 is no longer the gold standard. Is becoming the default by which to go by.

Once again I highly recommend if you have not checked out her website LFlegal.com, she provides a lot of presentations across the country. You could probably pull out some of them from YouTube if you Google her name. She has a very well updated website if you want to check out some of the settlements that she has negotiated as well. With that ,I will pass it on to John Toles.

JOHN: Thank you Johan. I will cover mobile platforms and features specifically iOs and Android. When testing with mobile, there are factors you want to consider. Look at your analytics to determine how much of your traffic is mobile versus desktop depending on the analytic, you may actually be able to determine if you are getting more traffic on iOs or android code devices.

When you find the information you want to consider the available features in each. Not all iOS devices will have access to the same accessibility features. But not all Android version 12. Some Android versions will include them as a default and you have to download them as an extra. Some will not allow access at all.

You also want to consider specific devices. Different devices will have different screen sizes and especially with Android, different devices will have access to different features. You might have access on one version of Android on the iOS and may be 2 very similar devices but one will have access to certain features in the other one will not. You also want to consider things like Bluetooth keyboards. Extra peripherals you can pair with your device.

Some common mobile accessibility features. Screen reader. Magnifier. Color settings on your device. You can customize these and sometimes you can have them all together and have all of the settings follow you across different devices. From your phone to your home computer or to your tablet for instance. You will have the same settings across all devices. Text settings. Such as your native text or the text color for the fonts that are available. Captioning and video. Captioning and video description. You want to consider different devices when planning for these features.

If you need captioning you want to be sure it is available and it is actually large enough when it is read on a mobile device. Also there are things like LED and vibration alerts. Everyone's probably familiar with that when you get a phone call in your devices on silent it will vibrate instead of playing a ring tone. You can also parent things are connecting to the device switches are basically single buttons you can pair up to specific inputs . Instead of having to go through a series of things you might hit a single button or have a single button that does something depending on the number.

Some iOS accessibility features. The main one we will discuss is VoiceOver. VoiceOver is the Apple Constellations devices. The screen reader included. It is different with Mac and iOS. Many people's opinions it is better on iOs. That is something you want to think about when you plan your tests . You don't want to just say test on iOs and think you have the Apple covered. With that one test. It is different on a Mac. You might want to also test I device as well.

Other accessibility features include Zoom. IOS has its own native Zoom application. So you can make the screen knowledge or and pan around and magnify text. You can change color settings in text settings and within text settings you have responsive text on your device instead of just enlarging it text you can pan around. Actually re-flows the content on the screen so it keeps everything on the screen . This is called responsive text.

There is a short video for navigating with VoiceOver. I have a link to the video here but I am going to jump into a web browser and we will watch the video.

[ VIDEO PLAYING ]

JOHN: Okay as we learn from that video, some of the features of VoiceOver are audio and haptic feedback. When it says haptic it means there is additional response in addition to the audio. You will file vibration maybe not like a full vibration like when the phone is ringing but your phone will make a buzzing. It is different for each function. That helps you differentiate what is going on with your device. In addition to the audio feedback. As we sought has visible focus of a black border on each item as you move through.

VoiceOver is helpful for people who have certain disabilities but also people who have difficulty just using the touch feedback on the device. If you need to track where you are on the device, you can enable voiceover in actually just turn off the speaking part and use VoiceOver to navigate the phone without actually hearing anything. There are many unique gestures for common tasks. There are some slight differences between iOS and android two they share basic gestures that we will talk about. When we get to the Android. It reads both screen items and text context on the screen.

One feature not covered in the video that is very important if you're going to use VoiceOver a lot of something called the rotor. When you have VoiceOver open, you can basically place 2 fingers on the screen and rotate as if you are turning a dial and that will bring up the rotor. Then the rotor will allow you to select items that you move between when you are swiping. If you are on a webpage and you want to navigate by the headings on the page, you can bring up the rotor and change the headings.

And then swipe through instead of swiping through every item on the screen you only swipe through the headings. You can customize the items on the rotor so you excised your most desired features. You can have a lot of items on the rotor and you can move through them or you can have the most important things you access frequently. There are some images not shown in the video of the rotor and what it looks like in iOS on your right-hand side.

Some of the important gestures for VoiceOver is the single finger swipe. It loose between items. The two finger swipe up reads the screen from the top. When you first get to the screen you want to know everything on the screen so you can placed two fingers on the screen and swipe up and it will start reading from the top. There is 2-finger tab which will pause reading and begin reading again. That was in the video. Anytime you want to activate an item, you double tap the screen and it will activate the selected item.

This was shown in the video but it is hard to understand what is talking about. Watching the circles move about. There is a diagram showing exactly what motion you are supposed to make to bring up the 2-finger scrub. You place two fingers on the screen and live in a C motion and that will dismiss alerts and return you to the previous screen. There is a link to an article from Apple to learn voiceover gestures on iPhone. That is a full list of all the gestures. These are useful for when you are learning to use VoiceOver.

Android accessibility features. Their version of the screenreader is called TalkBack. It also has a zoom function, magnification. It has similar color settings in text settings but most Android devices like responsive text features. Many Android devices when you change your text settings you will end up having to pan and zoom on the screen to see everything. It will not automatically re-flow the content to fit the screen. There is also a short video we will watch for a Android TalkBack.

[ VIDEO PLAYING ]

JOHN: As mentioned that was a video from Hadley.edu. They have a lot of additional resources for people with visual impairments or people who just want to learn about things like this posted on their website. Some of the TalkBack features are audio feedback the same as with voiceover. Depending on the device in the version of it, you may also have some haptic feedback as well. There is visible focus as a border around item but color will change depending upon the version of Android and the device. Some devices you can set the color and it will fall you from device to device.

Also there are unique gestures for common tasks and also it reads both screen items and text content on screen. There is a link on this page to the use TalkBack code tutorial but it may not be available for all devices. If it is not preinstalled on your device, you can search the Google play store for Android accessbility suite. You can download that app and it should be included with that you may not be able to download the Android accessbility suite depending upon the device or the version of Android.

Some of the common TalkBack gestures. A lot of these are the same for iOS. You have the single finger swipe to move between items, two finger swipe up reading the screen from the top, two finger tap will pause reading. Double tap to activate selected item. One of the unique gestures for TalkBack is doing a single finger swipe down and then to the right. That opens the TalkBack menu which you can use to control a lot of the features of TalkBack.

Some of the major differences between the gestures and iOS in Android, Android prefers multipart gestures whereas iOS instead of doing multipart gestures will do a multi-finger gesture. It might be swipe up with 2 fingers to read the screen then it is different if he noticed in the VoiceOver video swiping up with 3 fingers does a different function. That is the overall differences between gestures in both iOS and Android.

There is a link on this page to a Google article for using TalkBack gestures. The last part were going to discuss is comparing apples to non-Apples. Some functional differences between iOS and Android . IOS is closed architecture which gives user a lot of predictability and stability. There is a hardware and software integration they can rely upon to be the same when you go in and buy the latest iOS or iPhone . If it breaks and you get another, it will be pretty much the same. Then OS updates are pushed out simultaneously. When there is a new version of iOS comes out for all devices at the same time.

With Android there's a lot of fragmentation of software and hardware. Companies create lots of custom versions of Android. So you need to know what version of Android you have . Is it custom to the company or the company that made the device? Does it have access to all the different features that any Android device would have? But that means there are lot more devices on the market and many of them are very affordable.

Unfortunately because of that, the commitment to accessibility is not comparable. With iOS, Apple has made a commitment to accessibility and that means because they manufacture all the Apple devices, it applies to all of their devices . But that is not the same with Android.

Our last slide is a resources slide. There is a link to the BBC mobile accessibility guidelines. There is a link to an article called mobile accessibility at W3C World Wide Web Consortium website. There is an Android developer article for making apps more accessible and an apple report that features the accessibility of iOS. There is also a link to a consumer driven site on accessibility for Apple products and a repository of Android apps for people who are blind or visually impaired.

With that, we will move to questions. I will hand it back to Johan.

JOHAN: Excellent. Well done John. I highly recommend checking out the resources that John went over. It could save you a lot of time and grief. I will say we covered quite a bit of material here. You have either Android or iOS to voice device on you right now. Before you have to go in test, I would say to try it out on your own. If you have an hour or so in the evening or you just want to play around with it, that is really the best way to figure out how these gestures work. Quite quickly they will become intuitive. You do not need to look them up. I will share a real-world experience that John and I had just the last few weeks.

We were working with a competent and capable developer creating a native app. He had virtually no experience with accessibility. We talked about accessibility with him. He did not know what he did not know. So John and I began testing, I tested on Android and John tested on iOS, I think he was quite surprised at the amount of accessibility issues that took place.

So whether it is a very skilled developer or whether it is content editor simply uploading content, or checking the website, just the information that we covered here with some of the basic gestures would really help you to understand how inaccessible some digital content is. I would highly recommend getting your hands dirty and actually trying some of this.

With the videos we showed at easily shows you how to load VoiceOver and TalkBack . The last thing you want to do is get stuck and frustrated. I recommend that you review the notes in the PowerPoint and be sure you are familiar with the gestures and the ability to turn it on and off. You do not want to get stuck and frustrated. With that, we will open it to questions or comments. Was this helpful for you all? I will open it up. Are there in the other areas we could have covered here that we did not? Knowing that we are going into a little more detail next week on actual testing.

>>: My name is Cecilia and I have a question. We do a fair amount of construction using WebEx? I have noticed lately that some people come to class using a mobile app. So if they are using accessibility tools like TalkBack will they be able to use it the WebEx?

JOHAN: Yes. Yes they could. That is interesting that you referenced WebEx. We did some usability testing a while back for the CDC. I pulled in some specifics of individuals who are blind who use braille. So with that because we are all still in a pandemic and hopefully on the tail end of it, it was all remote. We actually did use WebEx. When we talk about accessibility, you are looking at a few things. You are looking at the end user’s skill set. Their familiarity with TalkBack or VoiceOver.

 And you are actually looking at the accessibility of the application itself. In short, yes. WebEx has made some strides toward better accessibility. If you had asked me that question number two years ago I would have said no even from a low-vision standpoint, their contrast was very compromised. But they have made huge strides. Last I checked, WebEx was relatively accessible. We were able to use it with individuals who are completely blind.

>>: That is great to know. Thank you.

JOHAN: Also if you want to know more about a company and accessibility initiatives, hopefully they have an accessibility statement on their landing page in the footer. Or I would type out accessibility in the name of the company. Often companies will even outline some of the initiatives they have taken. Maybe they have a V Pat a voluntary product accessibility template that might be of some value. They will often talk about the initiatives they are taking toward accessibility especially a company like WebEx. It is absolutely essential that people with disabilities have access to it.

>>: Okay. I think they are owned by Cisco.

JOHAN: That is true. I remember seeing a Cisco logo when you download it.

>>: That is great. Thank you so much.

>>: There is a question in the chapter assessment how does Zoom compared to WebEx?

JOHAN: I am a bit biased because I need you to chime in John because you have expertise in this area. But Zoom is highly accessible. I know of a lot of individuals who are blind who love Zoom. It has integrated some very intuitive and easy to use shortcut keys. Contrast is excellent in Zoom. They have taken a lot of initiatives to make it accessible.

With WebEx, if I were to choose one of the 2, I would choose Zoom but this is dependent on the agency that you work for. Sometimes it involves the dollar amount. So could you get by with WebEx? Probably. But I would have to test them both side-by-side here and now and then the challenge with a lot of these platforms is they change.

Hopefully they change for the better but not always. It is like an update or an upgrade to another iOS platform. 12 to 13 or whatever it may be. Sometimes they bring things along the way. But I will vouch for Zoom that it is highly accessible and one of the reasons we are using it here today. We have live captions that into be more accurate. But Zoom also has built-in AI captions that will provide a transcript as well.

Zoom has pinning and spotlighting capabilities. If you have an individual who is providing sign language or ASL, you can spotlight that person. I don't know if you have that capability in WebEx. I need to double check. As far as I know Zoom here and now today is the most accessible meeting and webinar platform that I am aware of. You are welcome Bobby.

We are just past 4 PM and we will have more to come next week. John Toles and myself and Ms. Daniels will present next week. We will be getting into a bit more detail on some tools that you can use for testing and other strategies. Unless there are any other questions we will go ahead and closeout. Thank you. I know we are very busy so thank you for taking the time to attend. Thank you John for all of his work on this presentation as well.

JOHN: Thank you Johan.

JOHAN: We will go ahead and closeout. Enjoy the rest of your day and thank you so much. Goodbye.

Session ended.

*This is a Captioned transcript provided by CIDI to facilitate communication accessibility and is not a verbatim record of the classroom session*.