



The 2017 Accessibility Conference:
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5 Important (and Free) Tools for Web Accessibility Testing

Transcript from the 2017 Accessibility Conference

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SPEAKER:

Hello, everyone. You should be here for web accessibility testing.

Bill Anstice is responsible for people with disability, managing JavaScript and assessments, planning for desktop accessible on disability.

John McNabb worked in an IT accessibility role, transitioning employees... Training them towards a transition to understanding accessibility standards and testing. John now works at

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CNIB digital as an accessibility consultant. Please join me in welcoming Bill and John.

(Applause)

SPEAKER:

Hello. Thanks for coming to the presentation. We will be talking about five free tools will stop some of these, they might seem very obvious. When we get into this list, just bear with us. Think about it as a different approach. A lot of these tools, some of you will be familiar with them. We think they are a good subset of tools where you can test validation.

So, I had this quote to start off with. It is not the beauty of the building to look at, but the foundation that will stand the test of time. If you code website, make it robust, make it future proof, and you will have a website that lasts. If you build something with garbage, you will get complaints and you will not be tailoring to the group you are looking at.

So, a session overview. We will be looking at the keyboard. Colour contrast analyser. We have aXe which is a plug-in, NVDA, and Windows magnifier. This could be in Safari or your Mac OS, for example.

JOHN MCNABB:

We will share all this online, so don't take notes or anything like that. We will get it out to you.

BILL ANSTICE:

The keyboard is a tool that everyone has on every workstation. The items that you can test with your keyboard, tab order, focus styles, keyboard and mouse parity.

So, consider what is happening. This seems obvious, but if you look back, there are several checkpoints, making sure that all elements are actionable.

With the keyboard, you can cover a huge number of components.

JOHN MCNABB:

If you have talked to designers, it is crazy how many people are not aware of tabbing and seeing what happens when they do that. A lot of people focus on mousing over stuff, so focus styles, the person you are talking to may be hearing it for the first time, so it is worth mentioning.

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BILL ANSTICE:

So, what to expect. As you tab the document, you will be pressing this backwards and forwards. It seems quite obvious, but as John mentioned, not everyone is used to navigating things in this way.

I see lots of people pushing lots of buttons but it doesn't work. Pressing space or enter works. It activates the button. You can use the mouse, but sometimes, a lot of the times, there will be a 'next' but if you are filling out a form. You have to make sure you are prepared for that.

Then, using your arrow keys. Once you have entered the element, you can start using the arrow keys to move through them, so you have to make sure you are familiar with what keys to use in different scenarios. Another option would be combo boxes. alt and down will open that out for you, so being aware of keyboard shortcuts is essential when doing keyboard testing.

Focus styles. We are looking at the focus indicator. If you add the presentation yesterday, this can be as simple as the default indicator that is on a browser. Most browsers are very similar, a dotted line already faintly, and the box might be bold of a different colour. Some of these scenarios for short of things like colour contrast or low vision.

Custom styling. This is regularly used on new websites. You can try to find a hover state, keyboard, keypress, those kinds of functionalities. With J Query, (inaudible), and a lot of businesses are applying custom sheeting to focus states, so it will not be a dotted line that you will see, or box. We are looking at Billy's presentation, and there is a (inaudible) which can be changing all the time.

When using non-native elements, you need to consider what the experience is going to be like. Is it how you expected it to be?

Mouse and keyboard parity. John mentioned that a lot of people focus on the mouse. You have a hot the state. Maybe you get a pop-up window, a tool tip, maybe a quick view on a project page. You need to make sure that when you are doing this in keyboard most that you have a similar experience from the keyboard perspective. These are the types of things you can validate with your keyboard.

Does it have a unique focus? Is there a quick view available?

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This is just a quick example of a quick script for keyboard testing. This is just great in you very quickly through the process. You can move your way through, but these will be failing through the tests.

JOHN MCNABB:

Test everything on a webpage from top to bottom, then identify different workloads and followed through the entire workflow using your keyboard.

BILL ANSTICE:

Moving onto the colour contrast analyser. A lot of tools will not be able to identify colour contrast. There are a lot of scenarios where they could fail. You can pick the foreground and text I give you a good ratio on that, so you can use your mouse to pick those options.

What you are looking for with this is a 4.5/1 or standard text. This is the text you will typically find through the body of the document. The only exception would be too large texts. If you are in a 19-point font, this is classified as large font.

This can make sense if you are doing a poster or something. It is easier to see because of the size itself, so you don't need to worry.

So, how do you use it? On the right-hand side, you will notice that there is an eyedropper and a hex code. If you know what colour is or you know what colours, you can put hex in there. I would recommend using the eyedropper, though this is not accessible to the screen readers. The reason for this, a lot of different web browsers display colours differently. Some are more vibrant, some have gradients, some apply different styling in different manners.

If you have ever done testing with Chrome, Firefox and Safari, none of them look the same. Colours are rendered differently with different browsers, different settings. You will want to use the eyedropper because it will be more accurate for you.

JOHN MCNABB:

Sometimes designers will pick a colour that is good, the does meet the ratio, but then they will use really thin text on the page. That gets rendered with a variety of different colours. The colour you intended it to be is just one of those colours, so sometimes, you have to hunt around on the text to find the colour that is dark enough to contrast with the background.

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You can find the pixels and work to make it not so thin in the future.

BILL ANSTICE:

Working on the plug-in. There are some automated plug-ins. This one here, this is one of the better ones. Resources are paired up with the toolbar, and that can make you a better experience for you.

You can install this through Firefox or chrome. There are instructions, so if you can't find the link, you can make access, but you launch the tools. If you click on the aXe... It might be the Accessibility option.

JOHN MCNABB:

Sometimes it is aXe, and sometimes it is a comet logo.

BILL ANSTICE:

(inaudible). If you are working independently, you may not have the resources of an enterprise or a corporate standard for accessibility. You may not had your internal checklist or guidelines to know what will pass. This will give you some clear definitions as to solve these issues, and if there is any more follow up, this will give you examples.

If you are on a page with tens of thousands of lines of code, this will give you a snippet of code. You can visually see what the code is and potentially why it failed right away.

There is also the ability to identify the (unknown term). This is really key. It can be difficult to navigate through (unknown term). (inaudible), and the same thing there.

The most important is the inspector button. We will show you how aXe works in the second, but you can be taken to the code in the page that you are currently viewing. You get the contextual view of what is happening. It is one thing to have a code, but you can't change it. Here, you can actually change it to know how it would change if you change the code to make it more accessible.

So, here we are. As I mentioned, this is the accessibility. I will click...

JOHN MCNABB:

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Show them where aXe is. There we go.

This is going to analyse the current page we are looking at now.

BILL ANSTICE:

It is taking time.

JOHN MCNABB:

It has to find a few things.

Some browsers will pop up and say, "this is taking a long time."

BILL ANSTICE:

On the left-hand side, you will have your results. You will see the times this was missed, so we had elements, (inaudible). This might not be critical, but this is the toolbars definition of what is important. I have seen scenarios where it is not described as a critical element. It will not diminish the accessibility all the experience of the page. This is just the opinion of the criticality of the item.

We will show the (unknown term), 1.4.3. Again, if you are trying to reference it to a specific checkpoint... You can quickly go back to and identify where this matches up. There is a specific page here, and this gives you a reference, especially if you are going to go back to a developer.

Here is the fail, and here are some recommendations, so if you modify it, it might fix it for you.

JOHN MCNABB:

There are sometimes false positives, but aXe is usually quite reliable. aXe might not understand that you have set white text on a black background, but you can test it out. It is good to use these tools together, because if you are sceptical of aXe, you can go to colour contrast and tested there.

BILL ANSTICE:

This will pick up the programming settings. If you have a background image that is dark and you have a white text, it will find white text on a black background, but if you have used a background image that is back, it can't tell what colour about brand images, so it will fail that.

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Treat it as a false positive, determine whether or not it is valid. If it is, treat it as a defect. If not, ignore it.

Going through, you have a summary of the issue. We have an inspector built in here. This brings you in with the actual code itself.

Some developers... Not all of them. Some developers are lazy.

JOHN MCNABB:

The other nice thing is that it integrates so well in your browser. Looking at the code right now, we can change this code on the spot, and if we want to run a screen reader and test it... Actually, we can analyse it again. You can test it a few times. You will know what to recommend for the developer then.

BILL ANSTICE:

It is going to make me analyse it again.

I wanted to show you the link to the University. It is at the top for more info.

JOHN MCNABB:

While we're waiting, with all the response of websites, often, if you shrink the width of your browser, you will see that there are actually three or four different types of layouts for that one page, and at some point, what you should do is go through those for layouts and run aXe again. You will get different results, but do it for a few different pages.

BILL ANSTICE:

Does everyone understand? If you are looking at one webpage, typically, there is a response of design. You're not going to have a menu, but you might have a hamburger menu on the left-hand side. Therefore, your tab experience would be different.

On a small thing, accessible word file, and you might need to consider this.

The link at the top, more information. That will take you back to the University. This will take you back to the relevant university page that is pertinent to the error message that you experienced here. Though it might fail if you point, it will only show up on page that is relevant.

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Switching over to NVDA. This has matured quite a lot over the last few years. I tossed it aside when it came out. It wasn't a great experience.

It is picking up some steam, and this is definitely something to consider if you are border lining into a blindness level. You might want to have some assistance reading the content on the page. I have worked with individuals that are using JAWS with Dragon. This provides them with a level of accessibility that Dragon cannot do by itself.

The same is true for Magic and ZoomText.

So, you go to the website here. There is a donation option that is available. It is pretty simple to install.

So, how to test. It is very similar to the experience with your keyboard. Work through it with a top down approach.

There are two ways to navigate this, and a lot of low vision users will use a screen reader.

Tabbing through the page will get you to the actionable elements. This is important. If there is something visual that should be actionable that isn't, you will identify that at the keyboard stage. You will not see this at the NVDA or JAWS stage.

Working with a top-down approach, make sure the elements are actionable, that they make sense. Make sure they are in the correct order.

They are still accessible and labelled properly, but does it make sense? Is it applicable?

I have seen things broken down into two columns, first name, postal code, number. The same information is over here. Approver and requester. This is first name, first name, last name, last name. Unless you set them up properly, you will not see this.

There are a lot of ways you can get around small defects, glitches or hiccups within an application. With myself, I purposefully find this with my users.

If you are testing this, assume that the user is a beginner level and they don't know the advanced levels. Again, you will be using arrow keys to move through the individual elements.

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These are not necessary actionable, but they are paragraphs, images, buttons, links. Are they being read properly? Are they in the right order? Are they all accessible? Is it a hidden object? Is it something the screen reader cannot interpret?

JOHN MCNABB:

Sometimes, NVDA will see things that you don't see.

BILL ANSTICE:

Yes, Aria can be read with a screen reader. It is not seen by a keyboard. You could use ARIA but it does not mean it will be tabbable or identifiable. That is something else to consider as well.

Jason and I were talking about ARIA earlier. I don't like it. He loves it. Different tools will provide you with different results and you have to make sure you understand what limitations there are.

Moving over to Windows magnifier.

Essentially, we are trying to mimic a low vision interface. It is heavily pixelated. There are other free tools which are available. Mac OS has a magnifier as well.

Most of your friends have them as well, and what we're trying to do, if you are familiar with Magic or ZoomText... I have seen individuals use up to 14 times magnification.

Here, you will see less. Think about how much real estate you have, and you will be looking at a small component of about the size.

Consider particular elements, like how accurate are they? We look to the form that indicates that you look at this title and it will give you a definition of what this title actually means. The problem is that the title shows up in a defined area to the right hand side of this title.

This showed up over here, so if I hovered over the title, the description is way over here and I can't see it. If I am looking at 400 times magnification with Windows magnifier, these tools will not show me the bubble.

JOHN MCNABB:

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If you have an icon and you have a tooltip pop up, that is OK to have that. When it pops up, I should be able to move my mouse over it and go sideways until I can read the whole thing.

Here, you can only see part of it when you scroll up with your mouse pointer. It should not have disappeared beforehand.

BILL ANSTICE:

Dynamically, changing items. Go to Ajax request. Google does not really do this, but when you search in Google, this starts providing you with results, even if you haven't typed in the whole world.

Imagine if you are simply really small and content is change dynamically, providing search results. In Google's instance, it is directly below. If you go to a new page, you don't want to be looking (inaudible)

One key is where the toolbar fails. You can move from issue to issue. I don't see there is a button on the far right. Outlook is another example.

In previous versions, they would only have one arrow. They put previous (inaudible)

So, things to consider. The ones I see other big issues, the rollovers, and they are the ones that I find really bothersome.

If you can't move your mouse, if it disappears, you are looking at some severe problems, especially if that is providing you with important information.

I think that brings us to questions. Questions?

SPEAKER:

Thanks, guys. What is your opinion on things like jump to content links?

JOHN MCNABB:

They have been around for a while. There are landmarks which work better, and you can go anywhere on the page. There is nothing you really need to skip, so wouldn't fail this page.

SPEAKER:

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Yes, is it possible to do them without breaking the order?? It is the first place (inaudible)

SPEAKER:

No, you want to skip to it properly... If you want to skip to the content, you have stuff before it.

BILL ANSTICE:

If you click these skip links and then tab, it will take you back up to tab zero.

JOHN MCNABB:

Good point.

BILL ANSTICE:

It depends. There are ways you can do it, as that will move the current focus to the element you have moved it to. If you do it that way, you don't need to worry. You will likely not see it because it will move to the element, but you haven't moved your tab focus.

There are ways to resolve this with your action item, even if it means hiding an invisible gif or something. There are three or four ways you can apply that without breaking your tab order.

JOHN MCNABB:

Another question?

SPEAKER:

I just wanted to ask a question regarding the screen magnifier. I just wanted to get your opinion on how important it is?

BILL ANSTICE:

It is an item... Jason will have its own opinion. We have been on both sides of the fence in terms of testing with magnifier. You can test low vision related items without it, but the problem is with layout. If you have a well-defined layout and there are certain components to get, you might be able to be exempt from doing specific testing.

I have seen webpages and applications extensively using content that is triggered by this. They have question marks all over the things (inaudible), and we can be exempt from it. If you don't have the standards and the processes in place, then definitely, you need to do this. So, there have been teams where we have said that we don't believe you have done the job. You are

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lying to us.

SPEAKER:

Question number three.

SPEAKER:

I have two. JAWS is in the lab for testing, but you have it in your presentation.

BILL ANSTICE:

It was just to show the different screen readers that were available. It is not cost prohibitive, but it is not too bad. If there is some information about usage rates. Not all screen readers have exactly the same, but JAWS is the most prevalent that is out there in the environment.

JAWS is good at guessing, and it will give you a false positive. If you don't have a form field labelled correctly, as long as you have text to the left, JAWS will guess that is what it is for. If you tried to pull up any of the information, it will not tell you it is wrong.

JOHN MCNABB:

It is great for end users, but not always for testers.

The other example is NVDA. The closest thing you have to that in JAWS is the Braille reader. This will give you an abbreviated message.

SPEAKER:

My second question is carousels. We have had a battle with marketing to get rid of carousels, and we want to get rid of the content panels into a tab order.

JOHN MCNABB:

(inaudible)

BILL ANSTICE:

You don't always know what the current element that is visible. You have small dots across the bottom, and you are not showing what is currently available.

I have seen attempts at this where they say here is the element and we will put Java script here.

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I have seen scenarios where they have put a carousel and got to the purpose of using it to hide it, and they have taken an element that is hidden from vision, and they have done all the images as a block. That is the remediation.

I don't know how long some of these solutions will be applicable for.

SPEAKER:

Carousels are brutal. With the marketing team, they should just focus on one picture of where the carousels should go, and underneath, they should break down this into sections, because essentially, what is the carousel doing?

BILL ANSTICE:

I have seen carousels on sales websites, but people would much rather navigate through. You have to know your audience. You have to look at your organisation, look at who you are working with. If you want to sell, do you want to sell four things really well? If you can, do that.

It can be contentious. Billy had an opinion on the fact that a lot of folks were saying that carousels should be one of those things that should be outdated, as there might be a place for them sometime.

SPEAKER:

Focus on the same attraction. Put some images underneath, and that is it.

SPEAKER:

Please join me in thanking John and Bill.

(Applause)

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