

LMS e-Learning Implementation Podcast Transcript #8 *e-Learning Accessibility For Training Managers and Human Resource Professionals, Part 5*

[music]

Announcer: SyberWorks podcast. Learn any time, any place.

Mary Kay Lofurno: Welcome to the fifth episode of the [SyberWorks e-Learning Podcast Series](#). My name is Mary Kay Lofurno. I am the Director of Marketing here at [SyberWorks](#), and I'm your host today. In the [first segment](#) of our miniseries, we provided some background on the Americans with Disabilities Act, [Section 508](#), and an introduction to the [W3C Accessibility Guidelines](#). In the [second installment](#), we looked at the W3C Level One Accessibility Checklist. In the [third part](#) of the miniseries, we looked at the W3C Level Two Accessibility Checkpoints. In the [fourth installment](#) of the miniseries, we covered the Level Three Accessibility Checkpoints. And in [today's edition](#) of the miniseries, e-Learning Accessibility for Training Managers and Human Resource Professionals, we will be talking about Flash accessibility. Throughout this miniseries, I've been talking with Al Lemieux, Senior e-Learning Developer here at [SyberWorks](#), and frequent contributor to the [Online Training Content Journal blog](#). How are you doing, Al?

Al Lemieux: Good, how are you?

Mary Kay: Good. It's really good to see you. All right, let's get started. Most people who use the Internet have seen [Flash](#), but they probably don't know what it is sometimes. So what is [Flash](#), Al?

Al: [Flash](#) is a multimedia platform that can produce simple animations, full blown applications or high-end presentations with streaming video. Because it is vector-based and because of the incredibly small file sizes that you get from it, Flash makes for an ideal delivery method.

Mary Kay: So what you're saying, essentially, is that it's the stuff that you see in a web browser and it's colorful and moving around, like multimedia.

Al: Yeah, but it's much more than that. Since MX2004, Flash, then owned by Macromedia, incorporated a smart way to deliver streaming video that was completely interactive. Flash 8 only builds on that interactivity and offers full alpha transparency support in the addition of q-points. Alpha transparency support is more than just typical transparency where an object transparency can be controlled with an alpha channel, so that subjects shot on a green screen background can be isolated with a transparency mask. [Flash](#) will properly read the transparency mask, allowing the developer the ability to use talking heads and other video elements that do not have an apparent background. These talking heads and other video elements can be put on any background of the developer's choice. Q-points allow the video to trigger events such as animations or scripts within the Flash movie. It's been really exciting to work with Flash over the years and to see how much it's grown.

Mary Kay: You know, intuitively, when I think about the concept of [Flash accessibility](#), to me it's kind of an oxymoron. But I do know that [Flash](#) can be rendered accessible. So what's the real issue here?

Al: Well for a long time, Flash was inaccessible until Macromedia partnered with [Useit](#), Jakob Nielsen's group. Nielsen published the now infamous article, "Flash 99% Bad", which caught Macromedia's attention. Nielsen pointed out all the ways Flash flew in the face of good usability models. In his defense, Nielsen was right for the most part. There was a lot of abuse on the part of Flash developers. They were making these huge interfaces that would take forever to

load. In order to entertain users while they waited for the real content, developers created animated intros. When users complained about this, they offered a “skip intro” button to take them right to the content.

Also, screen readers couldn't read Flash content, other than to mention the existence of an embedded object. The most you could do with it was to alter the html file that housed the Flash swf file, to add information for that impaired user. It just wasn't enough.

Mary Kay: All right, so what do you need to make Flash accessible?

AI: Well, I'm glad you asked. Macromedia set out to make [Flash](#) accessible using its existing development model. When MX2004 came out, an accessibility panel was added to the interface to give movie clips names and descriptions that could be read by the screen reader. Any text item in Flash could also be read by a screen reader. Using ActionScript, Flash's ACMA script programming language, additional interactivity could be made for the impaired user. It was a huge step forward for Flash.

Mary Kay: So what does the accessibility panel allow you do? Does it essentially make Flash movies accessible?

AI: It allows the developer to assign text elements to a Flash movie. A movie clip, for example, is a basic component of any Flash movie. Any movie clip can be made accessible and then given a name and description. Flash works with MSAA, Microsoft Active Accessibility, and uses it as a bridge between it and the assistive technology, whether it's Windows Eyes or Jaws.

Mary Kay: OK, AI, what about other objects like text? How are they made accessible?

AI: Flash exposes all text elements to the screen reader so no special attention needs to be given to any text in Flash.

Mary Kay: What about forms? I've seen some [Flash](#) sites that are completely interactive. Are those forms accessible?

AI: Yes, forms are created in Flash using components. Flash components are made to be accessible automatically. There are also quiz templates in Flash that use components, which are accessible as well.

Mary Kay: You mentioned earlier the use of ActionScript to extend accessibility in Flash. Can you give me an example or two?

AI: Sure. There's a great example on the Adobe website, in the [Developers Center](#) by [Thea Eaton](#). She develops accessible sites for Snert Studios. The example is a [drag-and-drop](#) puzzle application. You and I know that in order for a [drag-and-drop application](#) to work, you need to see the content elements to drag them around. An overlay of keyboard shortcuts can be accessed by impaired users when they hit the Tab key on their keyboards. The overlay gives instructions on how the user can interact with the puzzle. They can get to a puzzle piece by tabbing through and picking it up by hitting Enter. Then they can use Tab again to pick a section of the empty puzzle where they want to place the piece. Once again, they hit the Enter key to perform this function.

Throughout the process, audio snippets are used to give feedback to the user. The coded samples give movie clip elements keyboard access codes; drop target information and [audio](#) files to play for feedback. I was blown away when I first saw this example, and it's clear proof that Flash can be utilized as a development tool for accessible sites and for what Adobe calls, rich Internet applications.

Mary Kay: Wow that sounds really cool. Can ActionScript be responsible for other accessibility issues?

AI: Yes, you can bypass the accessibility panel in Flash altogether and code all your names and descriptions with ActionScript alone. ActionScript can also be used to control the Tab order, much like how the Tab index can be used in html to control the flow of a page. ActionScript also has the ability to detect screen readers and send information to them through the Flash player to let them know that the current movie is accessible.

Mary Kay: OK, let's move on to another topic. Flash video has emerged as a viable delivery method for including streaming video and Flash presentations. Are there any features in Flash that facilitate captioning?

AI: Well, captioning isn't inherently built into Flash. There isn't an automatic feature or function to create captions for video. There are tools available by third party developers that will allow you to enter your captions into an xml file that can then be imported into Flash. The Flash video file can then be given q-points, which will trigger the xml file to present a portion of its text on the screen, providing captions for the video. It's a little time-consuming and tedious at best, but these are options for doing this.

Mary Kay: What about rapid animations and frequent color changes in Flash movies?

AI: Yeah, a certain percentage of the population is sensitive to rapid flickering or flashing on the screen, and may have seizures due to it. You see this a lot in adware advertisements on the web that drive to get your attention. The best animations are the ones that present subtle, yet distinct changes in objects on the screen. The aim of the animation should be to convey meaning and deliver a message, not to frustrate and blind the user. A good animator wouldn't use tacky flickering and flashing effects anyway. So if you see them on the web, you know that someone is abusing Flash.

Mary Kay: What about the use of color in [Flash](#)? A lot of Flash presentations on the web are really vibrant and filled with wild colors. Can you say a little bit about the use of color and accessibility? I think it's important to talk about that.

AI: Well in a previous podcast, we talked about this. 10% of men are colorblind, and some women are colorblind too. If you are using color as an element to convey meaning, think of another way to display that information. For example, a light green button might be overlooked by a colorblind user. You might want to choose a neutral tone or something that's darker. The development process makes it hard to give up the level of control you have of designing in Flash.

You also can use any colors that you want. Most Flash developers use programs to generate the graphics that are visible in their applications. Those programs also provide a wide gamut of color choices. You may be forced to use a specific color palette in your corporate identity. Despite all this, the key thing to remember is to use color decoratively and appropriately, but to also think of neutral values for important navigational and informational elements.

Mary Kay: That's great. So where can [e-Learning](#) developers go to find out more about Flash [accessibility](#), AI?

AI: The Adobe website has an accessibility resource center at www.adobe.com/accessibility. You'll find all the pertinent information that we talked about here and then some.

Mary Kay: Wow, this is just a ton of great information, AI. It's awesome. I know you have to go, so that's all for today. Remember that all the links and resources mentioned today will be available in the transcript for this podcast located on the www.syberworks.comeulearning_podcast.htm page, in the [media center](#) of the [SyberWorks](#) website.

We hope you enjoyed this last episode on Flash accessibility. We look forward to talking with you next month. And until then, this is Mary Kay Loforno.

AI: And AI Lemieux from [SyberWorks](#). Have a great month.

Announcer: SyberWorks Podcast. Learn any time, any place.

[music]