

Unlocking Accessibility: A Roadmap for Digital Document Inclusivity

(SPEECH)

[00:00:00.41] Excellent, well, welcome everybody for attending our webinar today on unlocking accessibility, a roadmap to digital document inclusivity. So as we get started here, I want to start with introductions. And we'll go through our agenda. I'm David Herr. I'm the vice president of enterprise solutions here at Allyant.

[00:00:20.55] And I work closely with clients around document accessibility solutions. I've been in this industry for, I guess, going on 13 years now and excited to be able to talk to you today about our solutions. And have with me Aaron Page. Aaron, do you want to introduce yourself.

[00:00:35.89] Sure. Thanks, Dave. Hi, everybody. My name is Aaron Page. I am director of accessibility here at Allyant. My functions are primarily in our digital division focusing on websites and mobile application accessibility. I myself am blind. I was actually born with congenital glaucoma. I lost my remaining functional vision about 15, 16 years ago now, have been working in the digital accessibility space for the last 10 years, the last six of which have been at Allyant. And am really looking forward to talking with you all today as well.

[00:01:05.96] Excellent, so what we're going to talk about today on the agenda is we're going to overview of the problem of digital documents. There's a lot to talk about there. I mean, I think we always viewed documents as sort of being the last frontier of web content because there's so many other areas, fixing your HTML, videos that need to be captioned, and stuff like that. But people tend to forget about the documents. That can be a large portion of your website.

[00:01:31.49] Then I'm going to talk about a couple of real world examples in both the public and the private sector of the problem. I could probably talk about that for days. There's so much content out there to talk about. But we'll talk about some real-world examples. Then we're going to talk about how you can inventory all your digital documents and assess them for accessibility.

[00:01:52.64] And while we're done with that, we'll go through solutions for remediating large volumes of documents because what we typically find is that people have very large amounts of documents on their websites. And it can be overwhelming because you just don't know where to begin when there's so much to do. So where do we start? That kind of thing.

[00:02:09.81] And then specifically, we'll talk about authoring documents for accessibility, then finally, tools that organizations can use to ensure document accessibility. So with that, we'll jump into the content.

[00:02:24.63] I'll start with an overview of the problem. And obviously, websites contain thousands of documents. And despite efforts to fix your HTML, these documents can remain on the website. And they're a legal liability. Aaron, you want to talk a little more about that?

[00:02:43.86] Absolutely, as you said, Dave, most websites contain thousands of documents. Oftentimes, the focus is really on the web content itself, the website, the home page, content pages, things like that or the mobile application. While you might have tens or hundreds of pages on your website, as you point out, very often times, you may have thousands of documents on there. And it's much more difficult to get a clear picture using most content management systems and platforms that are out there of how many documents there actually are.

[00:03:15.59] Despite the best efforts to ensure that content is accessible, documents are a major accessibility liability as well. So yes, there is obviously a lot of litigation in this space focused around websites, mobile applications, that type of thing. But documents also are frequently targeted in accessibility related lawsuits, demand letters, that type of thing.

[00:03:35.93] And unlike websites, web content, where you may have a much more limited set of content authors or developers who are actually making live updates to the website, documents are often made by many, many authors. Everybody has a word processor on their computer. Everybody has the ability to create slide decks on their computer, those types of productivity tools. So documents are created by a much larger set of individuals than websites and web content, that type of thing.

[00:04:04.86] And as we said already, the legal liability is definitely present as it pertains to documents. And it's a big focus, as it should be, for organizations in 2024. Move on to our next slide here about why document accessibility is different from web accessibility. They are definitely very distinct problems to deal with. And it's helpful to think about the context with these.

[00:04:31.14] When you're talking about websites, websites are usually based on templates. You have let's take a modern e-commerce site. You have your home page. But then you have a template that you use for your individual product listing pages and your individual product display pages. These are all based off of templates. If you have a blog section, your blog posts are likely all based off of a blog post template that's there.

[00:04:55.51] And so you can ensure very wide accessibility and apply it globally across the website by applying those accessibility fixes at the template level. And same with components. These pages are oftentimes built using component libraries. And so you have a component in your design system or in your content management system that you can use to create a radio button set.

[00:05:18.22] Ensuring that component is accessible means that any time your content authors create something with that component, what they are creating is accessible. So it becomes much more practical to apply accessibility globally based on that fundamental underpinning of templates and components that build most websites. As we already said, limited number of webmasters that manage content.

[00:05:42.40] So you have a limited number of developers, likely a limited number of content authors that are going to be pushing content changes to your actual website. If the marketing team, for example, is the group in your organization that is responsible for updating and maintaining your website, then you can really ensure accessibility or help ensure accessibility by providing accessibility training for the marketing team so they are aware of how to use the tools that they have at their disposal to create content that is accessible and are publishing accessible content.

[00:06:13.24] Documents, on the other hand, are a different beast, many different authors, many different sources. And most of the common tools will create inaccessible PDFs if that's what you save it as. Looking at you, Microsoft Word, even if you do all of the things right, mark up your table headers properly, you add alternative text for images, you structure your headings, lists, and all of the various things, a lot of that can get lost in the process of actually converting or saving that from a Microsoft Word document to a PDF.

[00:06:43.12] So even if you are performing the right steps, you may actually lose a lot of that right there at the tail end. And so these tools that are oftentimes used to create and to generate content, these documents, word processors, PowerPoint slides, things like that, oftentimes, right there at the tail end, if you save it out as a PDF, a lot of that accessibility will end up being lost.

[00:07:06.50] Most web accessibility tools don't test document accessibility. And oftentimes, most content management systems are not good at giving you a report of just how many documents you have across your website. So even if you manage to try and track down your individual documents, your PDFs that you have on your website, how then do you go about assessing their actual accessibility.

[00:07:28.79] So actually inventorying, what do you have and what is the current state of the accessibility within documents, can be very difficult because most of your modern accessibility scanning tools that are out there, particularly ones that are popular like Wave, Power Mapper, they aren't actually scanning and checking for the accessibility of the documents that are present on your site. And so you need a specialized tool such as Common Clarity to really be able to do that. And so now I'm going to hand it back to Dave so he can show us a demo of what it's like to actually hear accessible and inaccessible PDFs with screen reading software.

[00:08:06.67] Excellent. Thank you. So this demo that I'm going to play here, we took a document it was a sample banking statement from one of our partners that we just used as a demo document. And we did two things with it. We ran it through Adobe Acrobat and just said, add accessibility tags. So this is Adobe out of the box tagging a document. It's probably a very similar example to what most people's published PDFs are today.

[00:08:35.08] They're either untagged, so they are completely inaccessible, or if they have been tagged, they've been tagged by some tool such as Adobe or Word or anything else where there's some rudimentary tags that have been added to the document. But there can be many, many problems.

[00:08:51.18] So what this demo does is it's using a screen reader. And it's showing the content on the tagged document that's not tagged correctly, what the reading problems are. And then it shows us the same document properly tagged and then how the screen reader behaves. And I think it'll be very graphic in this experience as to the differences as you watch this. Here we go.

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[00:12:32.62] So I hope you're able to see really what the experience is of encountering a document that's inaccessible versus a document that's properly structured, formatted, tagged, and can be navigated. But I think, Aaron, really, you have the most real life experience as far as what you encounter in the real world. So let's take a minute and just, why don't you just talk about what you've encountered in the past and what you do to get around it or what happens?

[00:13:00.97] Yeah, I love these examples that we just played here because for me, as a user of screen reading software, these examples really comprise two out of three buckets that I tend to think of it when encountering documents on the internet and their accessibility. And as a screen reader user, there are things in the second document, the more accessible, the tagged version that really jump out at me that aren't present in the first one that you played, for example, the headings, payment, due dates, or statement and balance, something to that effect, was marked up or tagged as a heading inside of the second document.

[00:13:38.75] That means for me, as a screen reader user, I could actually jump straight to that section and begin to read from it. It's equivalent to a sighted user looking for that kind of big, bold text and beginning to read from there. The order in which the dollar amounts were being read out, the context of each, what each dollar amount actually meant was being correctly read out in that second document, whereas in the first document, at times, it was just reading out the numbers one after another after another. It wasn't actually saying what each one of them was. And so the second document is just far, far easier for me as a user of screen reading software to be able to listen and follow and understand.

[00:14:18.80] The ironic thing is that first document that we played is not even the worst case scenario for somebody like myself, a screen reader user, when we encounter an inaccessible document. I always think of it as three different buckets. There is the accessible tagged document, which is the second one that Dave just played here, where it has all the tags. It reads out great. Everything is lovely. It's easy to follow and easy to understand. That great.

[00:14:44.69] Those are, unfortunately, few and far between when you're just pulling random documents off of the internet. And so usually it's going to be one of these other two. And so then you have what the first document was that Dave played. And that is a document that the text is reading out. However, the organization of it isn't there. There's no tagging. There's no structure. While some of it is reading out in a logical order, it doesn't provide you the necessary context for the different things.

[00:15:10.95] So I can read the text that's there. I mean, all the words that are in that document are reading out with a screen reader, it looks like. But can I actually follow it and understand it easily? Absolutely not. This is one where, yes, I could read it on my own with a screen reader. But I'm going to spend a good 10, 15 minutes just trying to organize it in my head, what is this document actually trying to tell me?

[00:15:32.54] That is probably the most common type of document that I will encounter just randomly off of the internet. And that is kind of the minimum standard because at least you can read the text. That nice. But then there's a third option. And that is when you encounter a PDF that is essentially nothing but a scanned image. And so might look like a document, but what's actually inside of there is nothing but a photo.

[00:15:53.99] And so for me as a user of screen reading software, when I go and open a PDF document like that, all my screen reader will say is, alert, empty documents. And that's it. And at that point, most screen reading software now comes with what's called optical character recognition built into it, where it will scan that photo and try to extract the image and try to take that completely inaccessible image and at least turn it into what you saw in that first example where it has a readable text. It might not be in a good order.

[00:16:24.23] But it tries to make the text at least readable. And that's a roll of the dice. The accuracy you're going to get depends on the quality of the image, what OCR, what screen reading software you were using. And so you just have to hope that you get something useful out of that in the event you

receive one of those scanned image PDFs. And those three buckets right there, a tagged accessible PDF, that's the rare one.

[00:16:46.64] Most of the time, it's either going to be a minimum accessibility PDF where there's just text that reads out with a screen reader and no organization or structure. Or worst-case scenario, you're going to encounter that image only PDF where the best you can do is run through OCR, hope to get the text out of it, and get whatever it is that you get.

[00:17:07.38] So let's move on from the demo. And let's go talk about some real world examples. So I can't necessarily name some of the organizations that are involved here, but you can probably tell by the name of this file what organization and government this one came from. But we took a document, pulled it randomly off of a government website, and we looked at it. It was 113 pages in length. And we ran it through our CommonLook PDF software looking for errors around accessibility.

[00:17:37.81] And remember, this is the automated testing. And there's probably things that manually still need to be verified like correctness of all texts and things like that. But of this 113 page government document, there were 25,618 failures. And you can look at a couple of them, there's lists that weren't defined properly. And there were heading levels that aren't defined at all. There's no heading level one, level two, level three. So there's heading level errors in the document and many, many other failures.

[00:18:08.06] So this document would not pass accessibility if we ran it through a screen reader like we just saw in the last demo. You're going to see many accessibility issues with this document. Or it's not going to be able to be understood whatsoever.

[00:18:21.52] And in this case, this is a document that people would download to be able to do their taxes. So this is very important. That this is a barrier to being able to fill out your taxes, do business, that kind of thing. So this is a huge problem. Aaron, did you have any comments on this government one before I move on to the next one?

[00:18:40.19] I just find the timing very funny that you're using the 1040 as an example here. And I believe it had over 2,000 or somewhere around 2,500 violations that were found in that example. And here it is tax time. All of us are beginning to work on that. And so I, as a user of screenwriting software, am really kind of at the mercy of the accessibility of this document or whatever the tax prep software is. If you're using TurboTax, how accessible is TurboTax?

[00:19:09.38] I will certainly say, from my experience, that can fluctuate on a year-to-year basis. And so if I'm not using a tool like TurboTax, though, my alternative is to use a PDF with over 2000 accessibility issues in it that is going to be probably impossible for me to read and understand with the screen reading software. And so it just really illustrates the barriers that users of screenwriting software, users with any type of disability who need that accessible document have to performing a basic function like paying your taxes.

[00:19:39.76] Exactly. So we're going to move onto another real-world example, some other content that we pulled back. So this was a large industrial company. Again, blanked off the name. But we did a scan of their website and discovered a large number of PDF documents. Pretty typical, in this case, we found 21,029 documents on their website that had accessibility issues.

[00:20:04.98] Of that group, 7,700 of them were tagged. About 12,000 of them were not tagged. So by default, 12,640 of the files, about 60%, are completely inaccessible. They have no tagging whatsoever. A screen reader may try to read it. But it's not going to have any structure. And it's just going to be basically gibberish in a lot of different ways.

[00:20:27.42] Of the 7,700 files that were tagged, you'd think, OK, well, maybe they work well from an accessibility standpoint. But as you can see by the pie chart here, they pretty much all failed. There's some warnings. And there's a few other real minors in the very small percentage here. But 100% of the files failed at least one test of the automated testing.

[00:20:48.46] And that just kind of shows you that this is very typical, that these documents been published over the years, accessibility has not been a concern. And in this case, this company, it's their product descriptions of all their different products.

[00:21:06.73] They're necessary to remain on the website as long as they're still selling the products. And these all need to be brought up to compliance from an accessibility standpoint. So it's a major task for them. Any comments on that commercial side, Aaron?

[00:21:20.76] No, I don't think so.

[00:21:23.73] Excellent. We'll move along here. So next, we want to talk about how you do an inventory of digital assets such as PDF. Go ahead, Aaron. And then I'll add to it here.

[00:21:38.50] Oh, I wasn't going to say anything. As I kind of indicated earlier, it's important to understand that most of your automated accessibility scanning tools and content management systems and other tools that are out there, they aren't designed to help you inventory your documents and to assess the accessibility of them.

[00:21:57.98] And so even if you are using these types of tools, the WebAIM WAVE tool to run an automated accessibility scan, or if you're using Power Mapper or the Alliant hub, whatever it might happen to be, these tools are likely only checking the accessibility of your content. They aren't inventorying, they aren't actually assessing the accessibility of the documents that you have there on your website.

[00:22:22.00] So when you get into this situation, you're really going to have to use a dedicated tool that's designed to find PDFs on a website and then lay out the accessibility compliance because it's not going to

be in your typical web accessibility testing tools in most cases, unless a company has integrated something into their product. For example, the Monsido tool uses a CommonLook Clarity engine in their system to do the PDF side.

[00:22:49.15] So let's talk about some specific tools that can be used. So CommonLook, who's been doing this for about 22 years now, and they're an Allyant company. We created a tool called CommonLook Clarity. And it's designed to spider a website, do all that discovery. So you start at the root of the website. And it's now going through and finding all the sub sites and all the additional information. And then it does a search for PDF documents.

[00:23:17.82] And what it will create then is an inventory of all the documents that have been discovered. And then it can tell us what the page count is. It can tell us the accessibility of the individual files. It can tell us what created the file. So was it Adobe? Was it a Copier? Or was it a Microsoft Word, InDesign, or the many different tools that are used to generate documents?

[00:23:40.33] A lot of that information is really useful to know because if you have a lot of accessibility problems, and it's all being caused by, let's say it's all Microsoft Word documents. So you realize, OK, we have a problem. We have a lot of publisher using Microsoft Office. We need to either teach them how to make more accessible documents or provide them with tools to be able to create accessible PDFs out of their content.

[00:24:00.74] So this compliance tool is something that can be used to do that inventory, to do that discovery, and figure out, what is the level of the situation so that you can then make decisions on how to proceed further? So looking at another Clarity report sample here, as you can see, it's listing the domain that's been searched. In this case, it was just a Colorado municipality that we did a scan here on. And you can see date and time it was run.

[00:24:28.95] You can see the URL of each file that was discovered. So as it discovers each file, it lists that out. Then it lists out the number of pages, which is very useful, because typically, document remediation, you're worried about how many pages you need to work on. You can have a document that's 500 pages long. It's going to take a time to remediate that document. Some of these smaller documents you can do fairly quickly. So knowing the page count is really useful information.

[00:24:54.34] And then the rest of the details that it's giving us here in this particular report are useful, not necessarily going to solve anything. But it'll tell you whether it's tagged or not tagged. It can tell you there's any corruption in the document. Sometimes, PDFs get corrupted, or whether it's protected and locked down. So I won't be able to fix it because it's write protected. But the producer information is very useful, like Adobe Acrobat or Word or PowerPoint or something else.

[00:25:20.71] We do test against different standards. So like if your organization's looking for WCAG 2.1 compliance or PDF UA compliance, you can test against a particular standard, of the status that our test ran, and what was the tool that ran it, which was the Clarity tool. So these reports can be extremely useful

in determining, what is my level of compliance? And then you can start working about how you go about moving in the next direction, which would be fixing it.

[00:25:48.18] So the next slide we have is how to get started on a document accessibility program. What we typically do is, as I told you with the Clarity tool, we can assess the level of the problem. And what we try to also recommend to organizations is, let's take a look at not only the accessibility of the documents that are discovered.

[00:26:13.69] But can we look in the CMS system? And can we look at how often files are accessed? Because if we can figure out what are the most commonly accessed files, and are they accessible or not, then we can determine the priority. And we can then look at, OK, because I'll give you a real world example.

[00:26:39.14] Client comes to us. We look at their website. We run a Clarity scan. And we discover they have 10,000 files on their website, as an example. Pretty common problem. So what do I do with the 10,000 files now? And I start looking at my budget and all the other concerns. And it's like, can I have afford, in a short period of time, to fix 10,000 files all at once? Probably no. It depends on your situation. But in many cases, that's too large of a problem. You can't ignore this. You can't walk away from it and say, well, I didn't know.

[00:27:06.39] I mean, it's out there. It's a problem. You got to fix it. So if you can take how often the files are accessed and then are they accessible or not, you can then start working on prioritizing which files we work on first. Let's say the most commonly accessed files are the annual budget and documents or forms that are used to do business with your organization. So you get all those fixed first. And you get those updated on your website.

[00:27:33.98] And then you can write an accessibility policy that says, if you do encounter-- we're still working on our files. And we're working to get everything accessible. But if there is a problem, you do X, Y or Z. Aaron, what's your comments on this?

[00:27:47.54] It's very similar to the approach that you have to take when it comes to your web assets too, your websites, and web pages as well. I always like to say that accessibility is a journey, not a destination. You're just never going to be able to review every single web page and ensure that it's accessible right out of the gate. It is a process.

[00:28:11.03] You begin by identifying, what are those web pages that are used the most? What are those components that are used the most? What are the tools that are being used the most to generate those types of things? And it's by focusing those efforts that you can get kind of most initial bang for your buck, so to speak, and you begin to work it out from there. You kind of stem the bleeding, and you create a plan to be able to action it.

[00:28:34.94] So it's very much the same approach that you have to take in the web space too because, as you pointed out, we all have time and budget constraints. And there are other tasks that the web team needs to be working on, the marketing team might need to be working on, the people creating those documents, whomever it might be.

[00:28:52.23] Accessibility is something that they are now doing kind of on top of their original day job. And so it is definitely a process. And a journey you're not going to be able to go make 10,000 documents accessible at once overnight, just like you're not going to be able to go and make every single page on your website accessible overnight.

[00:29:10.11] Exactly. So moving on, when we look at the analogy you have an idea of the scale and the scope of the problem, and you have a little bit of an idea of your priority, so what's the path to getting started on compliance? Some of the areas that we look at in this area, do you have the in-house capacity to do the work in-house? Do you have staff? Do you have software tools? And do you have the expertise to be able to do the work?

[00:29:40.71] Or would it be something where you'd look to outsource the remediation services, at least to get caught up to the current? And then we also recommend sometimes there's a hybrid approach where you'll do some remediation services. You outsource your remediation for the quick fix. And then you can look at developing the internal capacity to do remediation in-house as time and expertise comes up.

[00:30:09.51] So when we're looking at determining whether you're going to do this in-house or outsourced, whether you make this an internal project or an outsourced remediation project, it's very dependent on really where your organization is as far as resources and services. There's advantages and disadvantages to both.

[00:30:34.72] If you're doing this as an internal, project you are going to want to look at software tools because it can be a very manual process with a lot of the traditional tools that are used to do accessible PDF remediation. Do you have the resources to be able to do it? It's going to take staff time. You're going to have limited staff knowledge probably at the beginning, if you're not experienced at doing this already. I then we have a learning curve for both your new staff and any new hires that you would do to get them up to speed.

[00:31:04.61] If you outsource your remediation, there are advantages to this because you can bring in a qualified organization pretty quickly. And they can immediately start making progress in the accessibility of your documents. Your vendor is going to hopefully guarantee the work. And I would recommend that they do guarantee their work. It can be cost effective. And it can certainly be faster.

[00:31:27.77] The disadvantage is it may be a higher cost than if you could do this internally, depending on your situation. It will take time to do it. And of course, there's a wide range of vendor accuracy and quality levels, which is a really big deal because if you pay for this, you want to make sure you got what

you paid for. Aaron, any thoughts from your standpoint on whether you would do this in house or outsourced?

[00:31:53.53] No, my past experience before I came to Allyant was at the University of Montana. And we had this very discussion around both document accessibility and also things like closed captioning on video, whether it was something worth trying to do in house or outsource. And ultimately, the big thing that it comes down tends to be the cost and the expertise that's going to be involved, where trying to do it in house really can be an awful lot of time.

[00:32:22.57] We were quite fortunate at the University to be able to leverage a lot of student employees to help with things such as closed captioning. So that was a very effective way of being able to do that at a somewhat larger scale. But can definitely be difficult. And then as you point out, with outsourcing, there might be the added cost. But you get a lot more quality control out of it. The onus isn't necessarily on you now. It's on the vendor and the quality of the work that they produce. So it's a hard decision to make, to be sure.

[00:32:51.11] It is. And as you said, like in a University situation where you do have students that possibly can do some of the work, every situation is going to be unique. So that's an interesting perspective on that. So moving along here, this is just kind of reinforcing getting what you paid for when you do remediation.

[00:33:12.72] Vendors should be able to prove the compliance of the documents that they do the work for. So we suggest that you ask for an accessibility report. You ask for proof that the documents have been made accessible. They should guarantee their work, because if you've paid for this service, they should be able to prove compliance and guarantee that the accuracy of the work that they've done.

[00:33:36.51] It's a problem in this industry because of the demand for accessibility services in the last couple of years, there's been a lot of new companies that have sprung up, people jumping up to do this work. And if you're not doing this with the right tools, here's one of the problems with document remediation. I can give a file that three different organizations and say, make this accessible.

[00:33:59.67] And people are interpreting the WCAG check points and rules around accessibility. And there is some areas where you can interpret it slightly differently. And you might do the tagging slightly different. Now, if the document can be read and understood and navigated with a screen reader, that may not be a problem. But in many cases, people are just doing things flat-out wrong because they don't understand it completely.

[00:34:26.54] And if they don't have the ability to test it against the WCAG standards, they can be thinking they're doing the right thing, and they're not. And actually, they're making maybe documents less accessible or less understandable. So you want to make sure that you're getting what you paid for and that it's quality. So now I'm going to turn it over to Aaron to talk a little bit about document authoring for

accessibility because if you can avoid the problems start with, who wouldn't want to do that? So Aaron, I'll turn it over to you.

[00:34:57.00] Thanks, yeah, as you pointed out, Dave, the variability can definitely matter. Different accessibility experts, different accessibility vendors might have a slightly different take on how they interpreted a WCAG guideline. They might look at a document and a figure that is inside of it, and they might think of it in a slightly different way, provide different descriptions of it.

[00:35:17.79] And so it can so much of that can be avoided by you creating an accessible document, or as accessible a document as possible, at the original source. And it's important to note that the way in which you go about doing that is really going to vary. It's incumbent on you to research and learn and understand the productivity tools that you were using for creating your documents.

[00:35:45.72] And how do you go about making a document accessible in that? If you are generating your quotes out of Salesforce, OK, what do you need to do to the template that Salesforce is using to generate your quotes in order to ensure that those quotes are accessible? If you were using Adobe InDesign to create your marketing materials, how do you go about making a document accessible that is in InDesign? Each tool, the accessibility features and requirements, what it can and can't do, is get a vary.

[00:36:12.81] And the way in which you go about doing that is going to be different for each different tool as well. So there's not a one-size-fits-all when it comes to this. It definitely depends on the tools. And obviously, some of your more popular tools, the Office productivity suite, the Google productivity suite, they have gotten a lot better about this type of thing over the years.

[00:36:32.86] But in the end, with the vast majority of these tools, including the Office and Google suites, even if you do everything right at the source, you check all the boxes, you describe your images, you mark up your lists, different things like that, in the end, when you go to generate a out of that, it's still, just by nature of the way in which the software saves the PDF document, is not going to result in a fully accessible PDF.

[00:37:00.06] And so knowing and understanding those limitations is important as well. It is definitely important to design with that accessibility in mind. And especially, when I think of something like images, because five accessibility engineers could look at an image, and each one of them could have a slightly different twist on how they would write alternative text for that image.

[00:37:20.58] The trick is that the person who is actually inserting that image into the document, they are the one who is in the best position to describe that image, to provide that alternative text, because they're the one who put it in the document. They understand what the intent and the meaning was they were trying to convey by using that. Anybody else is just guessing.

[00:37:41.22] And so by designing with that accessibility in mind, even though understanding that you're not going to get a 100% accessible PDF coming out of Microsoft Word or PowerPoint, for example, it is

still important to do this because it will reduce so much of that variability that Dave was talking about just a little bit ago. Make sure I went through all the bullets here, yeah, and again, we mentioned Office documents. This again, it applies in Google. And it applies in Office.

[00:38:10.07] And how you'll do this with each different tool will vary. But in Office, for example, with Microsoft Word, using the inline styles to identify headings, we heard in that document headings being read out by the screen reader, that navigational tool, and also conveys the structure of the document. That type of thing is being applied using styles. But the way in which you might identify a heading in Adobe InDesign might not necessarily be with styles it might be using a different tool or a different feature.

[00:38:39.45] And so that's why it really, really is important to do your homework on the software that you use to understand how to create documents with that accessibility in mind. And then you can use tools like the CommonLook suite to be able to finish it off, give it the polish that it needs to have a fully accessible PDF.

[00:38:57.69] Excellent. Thank you. And with that segue, we'll go into the CommonLook suite. And we'll talk about some of the software tools and services that are available. So as Aaron said earlier, yeah, you author the documents as accessible as possible in the tools that you're generating the documents. So if you're in the InDesign, you're in Microsoft Office, you're in other tools, you want to be able to structure your documents and create them with accessibility in mind.

[00:39:27.20] But the reality is, once you're done with that, very often, you'll find that the documents still need some assistance in making them fully accessible. So we've developed over the years-- and some of these tools at this point now we're at better out in their fifth or sixth or seventh generation-- the whole suite of software tools around document accessibility in addition to services. So I'll go through them real quickly. But we have a PDF tool that's basically a power tool for document remediation.

[00:39:55.76] We have a plug-in for Office that allows you to take that final step and add the remaining things that Microsoft Office leaves out when converting to PDF from Office. We have a free validator tool, which I'll talk about in a minute. We have the Clarity tool that we showed you earlier where we can scan websites and discover content. We have a suite of automation solutions. And I'll talk briefly about how our automation solutions can solve particular problems.

[00:40:22.96] We have a full suite of training. And then we also offer remediation services for that hybrid approach of, I want to get a bunch of documents fixed immediately by professionals. And then I can also look at purchasing software and training to do the work in-house. So with that, let's talk briefly through the tools. So think of CommonLook PDF as basically a power tool.

[00:40:45.40] People, typically, really, the only way to do manual remediation is you open up the document in Adobe Acrobat and you add the tags. And once Adobe has added the tags, you can use their accessibility checker then to clean up the tags and fix some of the common accessibility issues. But

you don't get to fix all of it. And what you're going to find is, just because it passes the Adobe tester, doesn't mean it's fully accessible.

[00:41:10.99] There will continue to be many accessibility errors that need to be resolved. And you can manually go through Adobe Acrobat with many hours of work. And you can fix the documents and get them fully accessible. But it's back and forth, in and out of Acrobat, testing with other tools, going back into Acrobat, very time consuming. We as the analogy of a screwdriver versus a power drill and that yeah, you can do this with a screwdriver using Adobe Acrobat.

[00:41:38.09] Or you can get CommonLook out and use power drill and do the work in seconds, where it might take minutes or hours with the other tools. So it's a plugin for Acrobat. It's used by everybody. On it produces WCAG PDF UA HHS reports, faster, easier, quicker, recommended by agencies. It's a very important tool if you do a lot of remediation work. So definitely look into that.

[00:42:03.94] Our Office tool is really the everyman's tool. Every one of us probably has access to Microsoft Office at home or at work. And this is the ability now, when I generate my documents, when I create them with accessibility in mind and I use styles and things like that, when I save documents or I save PowerPoints, and I need to put them in PDF format, this tool will fix the accessibility issues that are still inherent in Office and generate properly tagged documents.

[00:42:31.57] So tables will be tagged correctly, even complex tables. Lists will be tagged correctly. And other content will come over the way it's supposed to with the right reading order. So this is a plugin for Office that makes it available for anyone that would have this plugin to generate accessible content. The validator tool is our free testing tool.

[00:42:54.93] So if you are using Acrobat, and you need to be able to test documents, this is going to find all the things that maybe Acrobat is not finding in your documents. It is the testing engine of our CommonLook tool. And we provide that as a free resource because we realize that organizations need to be able to test documents. They need to be able to prove compliance. And this is the best tool to do so. So we have this available. It's a free download from our website.

[00:43:23.47] On the automation side, there's a whole class of documents that aren't static documents. So your typical documents you find on a website are marketing documents. They're for public information. So if I put the document on my website, obviously, it's for anyone to be able to access. It's freely out there, probably quantity one of marketing material or a report or a form or whatever it is.

[00:43:48.37] But there's a whole other class of PDF documents. And that's ones that are generated out of systems. Think of your phone bill, your water bill, your electric bill, your bank statements, your invoices you receive. Many times, we're doing this electronically now. So you're online. You're looking at this on the screen. And if you download it as a PDF, if you save it as a PDF, those PDFs are typically not accessible from these systems.

[00:44:17.06] Many times, your back copies of your statement are stored in archived portals that are all inaccessible PDF. So we've created some automation tools that will allow organizations to pull that content out of their archives, tag it for accessibility, and then provide it to the user that's asking for the file. It can be done on the fly. It can be done in batch or in bulk.

[00:44:42.99] And we have a number of different tools that all fit in to be able to accommodate different high volumes and workflows and things like that. So we're pretty excited about our automation solutions to solve what we consider one of the last hurdles of document accessibility.

[00:44:57.98] On the training side, because we realize how important it is, you just can't outsource all your documents necessarily to be remediated, and because we got powerful software tools, training is a huge requirement. We used to do all our training in house, direct with the customers. And we've now gone and taken all the content from all of our training classes and have built online learning modules that allow you to go back, repeat classes that you're not sure about.

[00:45:28.49] Basically, if you buy the software, you can buy a subscription to our training modules. And then you have all of our full resources of the CommonLook suite at your disposal to be able to use as you're learning how to use the software. So we have this for CommonLook PDF. We have this for CommonLook Office. And we'll have this for other software tools in the future.

[00:45:48.69] In CommonLook services, this is remediation services. So this is sending documents, whether it's one document or both documents, we've had organizations send us 100,000 documents in large quantities. But we can remediate. We have a large team of mediators that have been doing this for years. They use our software.

[00:46:08.67] So not only do you get a remediated document. But you get a compliance report as well. It's fully guaranteed. And we do this all the time for hundreds and hundreds of organizations around the world. So with that, I want to thank everybody. And we'll now open the floor to questions. So what I'll do, Aaron, is I'll go ahead and read them. Some of them are kind of similar. So I'll kind of consolidate them a little bit.

[00:46:40.25] There were some initial questions about the demo that we ran where we showed the screen reader. There were some questions about how the tables were tagged. We tagged the tables correctly as a table. And we tagged the table rows and the table headers properly.

[00:46:58.57] We do the associations with the table rows with what column header they're associated with so that, as you saw in the demonstration, when the screen reader reads it, it's going to read the column header in association with the column content so that it makes sense to the person using a screen reader. Aaron, any comments on how tables work typically with screen readers?

[00:47:22.72] If you are a screen reader user, if a table is correctly structured inside of a document, then navigating a table in a PDF is actually no different than navigating a table on a website. And so for a

screen reader user, the tell is as you're listening to that PDF document, there are several numbers that read out. I think some were current balance, previous balance, different things like that.

[00:47:47.93] And in the first document, you literally heard just number after number after number reading out one after the other without any context, which wasn't the case in the example of the second document. And that that's the ideal outcome that you want to be able to have is have it reading out in a logical order or using proper table markup so that if you're using table navigation, you will hear those associated row and column headers reading out.

[00:48:14.32] And there was second question from Vanessa about providing training for JAWS. And that if we don't, could they recommend where they could get training to use JAWS?

[00:48:24.55] I do use JAWS, actually. The JAWS is definitely my go-to screen reader. Our digital division here at Allyant, all of our accessibility auditing work that we do is primarily focused on the JAWS and nonvisual desktop access screen readers.

[00:48:38.51] So if you are looking for a free open source screen reader that is extremely powerful, not as feature rich as JAWS, admittedly, but for accessibility testing for basic typical user use, NVDA is a free, open-source screen reader. It is fantastic. We highly recommend it to our clients whenever they want to do their own accessibility testing. So feel free to check that out if you don't have a JAWS license.

[00:49:02.71] To your question about training, I will say, I actually have my JAWS certification from Freedom Scientific. The training resources that they provide are phenomenal. And so actually, if you just simply turn on JAWS, go into the Help menu, go to where it says Resources, and you'll find a training section in there.

[00:49:23.99] And they have a dozen or more ebooks that JAWS will just automatically download, diving into navigating web pages, navigating emails, using common productivity tools like Outlook and Word, things like that. They're extraordinarily detailed. And then when it's all said and done, those are the materials that comprise the actual JAWS certification that Freedom Scientific offers, which is a great way to ultimately test your knowledge and get something saying what you're talking about, very useful, great training resource.

[00:49:59.32] So there was another question. I believe this was probably about the Clarity reports and asks, was this a global report? Or were there specific views for each document too? And [? Marian, ?] the answer to that question is yes, there's a whole number of feature reports in the tool.

[00:50:12.21] We can look at globally, unison overview of what's been discovered. We can look individually into individual files. And there's probably like 10 or 12 different reports around the discovered content when we scan a website, find all the PDFs, and then give you different views of what that content is so you can make decisions based on how to proceed.

[00:50:33.69] There's another question about whether it would be better to use a locked document, a Word document file, instead of a PDF, in other words, I guess, so it can't be changed if it's in the Word format. And the answer to that is Word has more accessibility issues than PDF. So even if you take a standard Word document, and you use the Accessibility Checker in Microsoft Word, you're going to have a better document.

[00:50:58.90] But if it's saved as a Word document straight up, there can still be some accessibility issues within tables and within some other content. So there's pluses and minuses. Most people go to PDF. And if you tag the PDF properly, it's then going to work extremely well with a screen reader. So the preferred format is PDF. And we didn't do a slide of this. But the PDF association has been doing a study since 2000 I think 12, on use of documents on websites.

[00:51:29.59] And PDF is continuing to go up. And almost every other format has continued to go down to the point now where I think 90% or 95% of document content on websites is all in PDF format. So it's better just to make the PDFs accessible.

[00:51:44.17] I agree. I just would chime in. As a user of screen reading software, if you gave me two choices, and you said, here is a perfectly tagged accessible PDF, and here is a Microsoft Word document that has passed the Word Accessibility Checker, I will take that accessible tag every single time.

[00:52:02.30] It's just like navigating a website for a user of screen reading software if the PDF is done right and done well. And so it's very seamless in that scenario. So I agree with Dave. Accessible PDF is the way to go.

[00:52:16.63] There's a question about, what accessibility standard do you select in CommonLook to review PDFs? It really depends on your organization. I mean most of the laws now seem to be pointing towards WCAG. And then many times, they will specify the latest WCAG specification. So we take 2.0, 2.1, now 2.2, or PDF UA. HHS is also supported.

[00:52:43.11] I think right now, as the most current standard that is accepted by most organizations, you're probably going to do a WCAG 2.1 AA, with 2.2 right around the corner. The laws have continued to point towards the current standard or the next applicable standard. If you make the documents accessible to any of these standards, they're going to work well with a screen reader. So that's excellent.

[00:53:05.37] I also know some of the laws do not require you to go back and continue to-- in other words, if you've done remediation of documents to say WCAG 2.0 or 2.1, you're not required to go back and then redo those documents that 2.2 in the future. So there's a little bit of that because the documents are still accessible. There were a couple comments about the slides being blurry. And I apologize for that.

[00:53:29.07] What we will do is we'll make certain that the slideshow is shared with the audience when we're done with this. And we'll send that out as an accessible document once the conference is over. So I apologize for any quality issues people had with the screen.

[00:53:45.08] And there was a question of CommonLook Clarity testing all of the WCAG CSs. Automated software can only go so far. If you use our CommonLook PDF or validator tools, the content that needs to be manually verified by human is something that's part of the process. So it will actually ask you to-- in other words, we can test to see that there's a presence of alt text.

[00:54:10.19] And if we see the Alt text is only one word, we can at least flag that as a warning. And then you can go back and look at it. But it does require somebody to look at the content and confirm that that alt text is an accurate description of the figure or the image or the chart or whatever it is.

[00:54:26.88] So there's a lot that can be tested with automation with documents, probably more than so for just web content. But there are still some manual processes that need to be checked. But yeah, if it fails the automated tester, you know you've got to go back and look at the content manually.

[00:54:42.65] And there was another question about from Steve about, what about PDFs that are dynamically generated? And we did cover that a little bit later in the presentation. On dynamically generated PDFs are a major problem for a lot of organizations. It's almost like that last blast frontier if you've done the website. What about your invoicing systems and your accounting systems and your statement systems and things like that?

[00:55:04.36] Those can all be done through automated tools now. And we have several different solutions around those various platforms that allow you to integrate PDF remediation as an API call or an automated call against those systems so that when somebody requests their statement, and they want to download it as a PDF, it can be either done on the fly or done in batch mode.

[00:55:27.36] And there was a question about, is the PDF checker available cross-platform? And I guess, two things. So we use the same PDF checking technology in all of our tools. So CommonLook PDF, CommonLook Validator, CommonLook Office, and CommonLook Clarity are all using basically the same testing technology on the back end. And thus, the reports are all the same.

[00:55:56.17] So if I create a document in CommonLook Office, and I save it as PDF as accessible, I get an accessibility report. It's the same accessibility report that I would get if I fix the document in CommonLook PDF and even in our automation tool. So we do have the same testing technology. On platform-wise right now, CommonLook PDF and the validator tool run on the Windows platform. So if you're talking Mac versus PC, it is a PC-based tool at this moment.

[00:56:26.59] Then there was a question about, what are some of the common errors that you see with a document that correctly passes Adobe PDF? There's a lot of them. I know the Acrobat checker has various fairly common PDF accessibility problems that it will discover. But you can go through all of those. And when the document passes Adobe, it can still have many accessibility issues. I know tables can be a major problem.

[00:56:54.89] There's other content that can have major issues. We can certainly set up a demonstration and show you clearly, what are some of the errors? We can take a document and pull it up in Acrobat, have it pass the Acrobat checker, and then walk you through all the errors that are still within the document. We can get our technical folks on a call to do that. So Jason, if you're interested in seeing that, we'd be happy to set that up.

[00:57:20.44] And there was a couple last questions here. And I know we're running out of time. Monica had a question about using InDesign. And she said that she'll design her documents. But then she still has to do a lot of manual remediation after everything's been tagged in InDesign.

[00:57:34.76] And this has been a common problem for years. And I know there's a lot you can do within InDesign to generate better documents. I don't think it's still 100% though. And you are still going to have to do some manual remediation after the fact. And we'd be happy to talk further about that in detail with some of our technical folks after this call.

[00:57:59.49] Our last couple of questions here, why review for conformance instead of PDF UA? What's the best practices rather than just the minimum requirements for Section 508? We fully support PDF UA. In fact, our CTO is involved in the development of the PDF UA standard. He works with the ISO on that.

[00:58:26.36] So we fully support PDF UA. It's really more of a, what is your legal requirements from a preference standpoint? On a PDF UA document or a WCAG 2.1 AA document are both accessible. They're both going to work well with a screen reader. PDF UA has added some additional criteria. So in some regards, if you create a PDF UA, you're going to meet all the different requirements. You're probably going to be in excellent shape.

[00:58:55.33] All these standards are continuing to advance. So PDF UA is coming out with version 2 that will be out, I think, later this year. And that will have even additional accessibility components built into it, which is a good thing. The other thing with these standards is they are subject to interpretation. So how somebody interprets the WCAG standard and then how they would actually tag content can vary slightly.

[00:59:20.74] We tend to choose the approach of best practice, what works best with a screen reader, what works best from a usability standpoint. When you get those criteria issues where there's different ways to handle the same content to make it accessible, we always go with best practice and having folks like Aaron on the staff where they can actually test stuff with screen readers and tell us, what is the best practice.

[00:59:42.45] Then it looks like Jason had asked another question about, for example, if everything was manually tagged and checked with Acrobat. So that would be of, I guess, if you used InDesign, save the document with the tagging, and then you checked it with Acrobat. And Acrobat passed it. But it still has accessibility issues, which is very likely to be the case if Acrobat is your only tester.

[01:00:03.41] We always recommend if you're using Acrobat alone, that you use somebody's third-party tester. People use PAC 3. People use CommonLook Validator. Use one of those third-party testers to prove or disprove what you've done with Adobe to make sure that you've gotten and taken care of everything.

[01:00:21.47] Somebody asked a question about how you deal with STEM content, mainly math. And do we provide Math ML. I believe Math ML is being built into the PDF UA version 2, or at least they're making references to it from what I've seen.

[01:00:40.33] Right now, the only way to deal with math in PDFs is to tag it as a figure and then provide alt text for the math equation or the math formula. So unfortunately, that has not been supported in the current specifications for PDF accessibility. But I do know it's on people's radar and that they're working on it.

[01:01:00.73] Somebody asked a question about whether language would be a problem with our solutions. And nope, we support all languages. In fact, we remediate languages left to right, right to left languages, Arabic languages, Chinese languages. They can all be tagged and properly made accessible. And our software will support that. And then somebody asked what's included in a compliance report. We are going to run out of time with all these questions. We got lots of questions.

[01:01:28.58] Real quick, I'll answer this last question. And then we will get back and follow up with everybody on the remaining questions. So we ask, what's included in a compliance report? So when we do remediation or we generate a full report that shows checkpoint by checkpoint.

[01:01:45.89] Let's say your standard is WCAG 2.1 AA. So each of the checkpoints for the presence of heading levels and alt text and how images are handled, how heading levels are defined, how paragraphs and lists and tables are all tagged, each of those checkpoints, we go through the document. And each line of content within the document, we will specify that it either passes or if it fails.

[01:02:11.57] Obviously, if it fails, we will go back and fix it. That's part of the remediation process. So when you get a compliance report for a remediated document, it is showing checkpoint by checkpoint everything we've done to make certain the document is accessible and will work with a screen reader.

[01:02:26.21] So with that, it's a little bit after 2:00 now. I have probably another 15 questions on here. So we will get back to everybody with the answers to these questions. We'll go through them and reach out to everyone. This presentation will be available. And we'll get that out to everyone. And I apologize for any fuzziness that was in the presentation. And we want to thank everybody for their time. Aaron, any last thoughts?

[01:02:48.77] No. Thank you all for joining us today. Hope you have a great rest of your day.

[01:02:52.81] Excellent. Thanks, everybody. Take care.

[01:02:55.86] Thank you.