Lukas (00:00):

All right, thank you everybody for joining. My name is Lukas from Typefi, and today's webinar is going to be about the fundamentals and best practises of accessibility. And as I'm sure you know, it is going to be hosted by Chad and I'll let Chad talk about himself a little bit when he gets going. But he's a co-founder of Chax Training and Consulting. He's been helping organisations with their accessibility for over 25 years. Real expert in the field.

Guy (00:43):

Did we just lose Lukas?

Chad (00:45):

Yeah, Lukas was having, Lukas was having trouble earlier. Oh, I think we still see his slide though.

Guy (00:52):

Yeah, we still see his slide.

Lukas (00:53):

Oh, did I drop out there for a second?

Chad (00:55):

You did. Okay, he's back.

Lukas (00:57):

Okay, I didn't even notice. Sorry about that. Yeah, if that happens, yeah, just feel free to pick up. But yeah, so Guy van der Kolk from Typefi is with us as well. And my name is Lukas Kaefer, and so if you have any questions about Typefi, I'll post our emails as well. Got a few of us here today. A couple logistics things. I'm sure you guys have all used Zoom before, but you've got your mute buttons there on the left side for the camera and mic. If you do have questions or you want to chat with another participant, you can use the chat function right there in the middle. There's also the raise hand button on the right, so we will have Q&A at the end, but if you have a question that's very related to what Chad is talking about, feel free to raise your hand and we will answer.

(01:57):

If not, just post in the chat and we will get to it. The recording will be available within a day as well. We also have one other webinar coming up in December, kind of continuing with the accessibility theme. So that one is going to be focused almost totally on the European Accessibility Act, which if you do business in the EU, you've probably heard of this, it's going into effect in I believe, June of 2025. So Will Awad from Maverick Publishing Specialists is going to talk about what it requires, some of the differences by country, and he's going to give some tips to update your front list and back list titles as well. So I will post a link in the chat to that as well.

(02:51):

Quick background about Typefi. The company is based in Australia, founded in 2001. We have a couple different products, kind of all related to InDesign and InDesign Server. So we have an automated publishing system, a few plug-ins for InDesign and some cloud services for InDesign Server that we call RunScript. So this is kind of just my quick, this is what Typefi does. You're seeing just a little GIF here. It automatically lays things out using InDesign, does it really, really quickly. And in terms of accessibility, it can help you produce accessible formats, create PDF/UA compliant files faster, and you can publish

that accessible content using the same source as you use for your other outputs. And it really is a huge time saver. Rhino Rack, for example, cut it down from one month to three days. So pretty significant. If you're interested, talk to us. And that is all for my little intro. So Chad, I will turn it over to you.

Chad (04:07):

Thanks Lukas, I really appreciate it. And yeah, I've been working with the guys over at Typefi for, oh my gosh, I mean I can't even count. I mean Caleb Clauset, I've been friends with Caleb for quite some time and Guy, and Lukas and I just met for this project, but it's really nice to make everybody's acquaintance. So I want to thank everybody for coming today and I want to thank Typefi for asking me to present today. Anytime I get the opportunity to talk about and educate people on accessibility, I really love to jump at the chance and I'm going to go ahead and start sharing my screen. I've got some slide decks that I'd like to share with you.

(05:02):

I just have to pick the right screen here. There we go. I think, is everybody seeing my screen okay? Yep. Yep. Cool. Thank you so much. So I titled this session Designing with Accessibility in Mind. This is actually a regular talk that I give for a lot of clients, but I kind of tailored it to, I only have actually less than an hour today to talk about this. So I'm trying to kind of distil it down to some of the key things that we need to know about. My name is Chad Chelius. Several years ago, my partner Dax Castro and I started our own business called Chax Training and Consulting. And we started the business because we basically just wanted to help people. I mean, that was really the founding principle of our company was that we saw people trying to implement accessibility into their organisations.

(06:17):

And unfortunately we saw people making a lot of mistakes and it wasn't their fault. It's because there's a lot of misinformation out there on the internet. We're all kind of guilty of thinking that we could just Google stuff and be able to figure out and learn how to do something. And a lot of times that certainly is the case. But when it comes to accessibility, there are some right ways to approach things and there are some wrong ways. And so Dax and I really, our objective is to really just try to help people through this process. Our company offers primarily training, training and consulting. We offer PDF remediation services and then obviously Dax and I also speak at events and smaller venues like we're doing here today. That's what Chax is all about. We're all about document accessibility. We do specialise in documents, by the way. Part of that's because I'm a printer at heart, I've been a printer for 30, when I say it out loud, it sounds kind of big number, but more than 30 years I've been a printer.

(07:39):

And so documents, I kind of naturally gravitate towards documents. But our company does primarily document accessibility, but we also do offer web accessibility consulting as well. So if anybody needs help with that, please reach out to us. I put my email address on here, chad@accessibilityunraveled.com. Accessibility unravelled is a little tagline that we developed for our podcast. I dunno if everybody's familiar with our podcast, but we produce a podcast called Chax Chat, and you can find it by going to chaxchat.com or we are on all of the major podcasting platforms, Apple, iHeartRadio, whatever, Spotify, whatever you choose. And it's really a podcast about document accessibility. That's really what we talk about. Now in my defence, we've taken a small hiatus because Dax and I are currently in the middle of conference season next week we head to our third conference in three weeks, four weeks.

(08:45):

So it's been quite hectic for us. So once we get back from that, we plan on getting back to our podcast. And then if any of you are doing document accessibility on your own, a really great resource, and it might not be obvious, but we have a PDF accessibility Facebook group. And believe it or not, it is a super active group. We currently have about 5,000 members in the group. It's really quite impressive and it's really just

a group where you can go and get questions answered about document accessibility. Alright guys, so enough about me. Let's dive into accessibility. So let's just talk about some accessibility basics. What is accessibility? At its core, digital accessibility is a process of making digital products, and that could be PDFs, websites, mobile apps, EPUBs, all digital technologies accessible to everybody. And we use that term accessible to everybody because various people potentially have various disabilities. And what our goal is to make sure that our content can be consumed by whoever wants to consume it, right? That's really the foundation of what we do.

(10:08):

So who is it for, right? This seems like a simple question, but it's a really good question to talk about. When most of us think about digital accessibility, we tend to think of users who are blind. We tend to think about users without sight trying to read information, trying to consume content. And that certainly is one of the sectors of people that we are trying to meet the needs of. So that certainly is one group of people, but we're also talking about people with low vision. As I stand here before you, you can see that I'm using assistive devices. I've only needed them for the last two years, but I can tell you it's really challenging. I mean many of you here, I think you can sympathise with me. It's always frustrating when I go into a restaurant in dimly lit lighting and they hand me a menu set in 8 point font and I'm like, oh my gosh, I can't read this. I can't read that without the help of my assistive devices. So as we all are getting older, as we are, ageing low vision is a really real challenge for many of us. And so when we create our documents, we want to try to make sure that the needs of even people with low vision. It affects people with mobility issues.

(12:03):

Again, as we age, you know what I mean? Tremors are a common thing that people are dealing with, but other people have other mobility issues that create challenges for them as they're trying to consume content. And you also have people with cognitive impairments. And this is a really interesting category because cognitive impairments is a really very, very broad category of disabilities. It can range from one extreme to the other, but even as an average person, I could tell you just the other day, I read a newsletter every day and I had noticed that they told me that the newsletter was available online in audio format. And I thought, wow, what a great alternative way for me to consume that information. But I will tell you, when you're audibly listening to something, I don't know if anybody here would agree with me, but I really struggled to be able to absorb that information in the same way that I can when I'm reading it with my eyes. And it just really made me kind of think about exactly what we're talking about here. And probably at some level that is a cognitive impairment of mine where I don't really process information as well when I'm hearing it versus when I'm reading it. And then another big one that we need to keep in mind is colorblind.

(13:50):

This is a standard graphic that we often see here. And basically what this is, it's a colorblind test and each of these circles has a number in it. And if you're having trouble reading any of those numbers, you could have some level of colorblindness. I don't know if you guys are aware, I thought this was a really interesting statistic. The group of people who are most impacted by colorblindness, older white males, they are the group of users who are most likely to be colorblind. African-Americans are almost like no colorblindness. So it's a really interesting statistic, you know what I mean? But colorblindness is certainly a factor. As we're creating our content, we want to make sure that people can read our information. So I have a couple of graphics up here. A lot of times when we're out and about, we will see this type of information.

(15:12):

And you can see here that in this diagram, they're using colour to try to create a relationship between the chart on the left and the graphic on the right. And that is actually a WCAG violation. If you're not familiar with WCAG, WCAG is the Web Content Accessibility Guidelines, which also applies to documents. And

WCAG basically says, do not use colour as the only means of identifying information in a document or on a webpage. And when you do that, you're violating that because again, if I have a colour disability, I may have trouble creating that relationship. So what can we do to improve it? I'm going to go back here again. What can we do to improve it? Simply adding labels can make a huge difference. So what I did here is on the right, I added labels to create the connection between the chart on the left and the graphic on the right.

(16:26):

And now we're using something beyond colour alone to identify those objects. So little things like that can make a really big difference, right? Because if I do have a disability with being able to identify colours, this basically takes that out of the equation and says, okay, now I have a label where I can connect A+ to A+ and B to B, and so on and so forth. So those are things that we all need to think about as we're making content accessible. Similarly, using more than colour is huge here because in this case, the graph on the left is using colour as the only means of differentiating between these elements. I don't know if I can do this. Can you guys see that? That window on top of my slide?

Audience (17:40):

Yep.

Chad (17:41):

Okay. So can you see on the left? So this window is using a tool that I like to use called Sim Daltonism, and what it does is it simulates colorblindness. And if I move this down, you probably don't remember what it was, but you see how it is orange and green, but for somebody who's colorblind, they look exactly the same. So now I'm unable to differentiate between those values. The way around that, actually, let me bring that back up. The way around that is over on the right, I added shapes to the lines to help differentiate them. Now, the one that I'm showing you right now is not a great example, but if I go to my next slide. Anyway, what I was trying to show you is a great way to differentiate them is maybe between these lines, make the shapes, one is a triangle, one is a square, one is a circle. That's how you can differentiate those items. So the solution is don't use colour contrast, use labels, and that's how we can get around that limitation.

(19:14):

I wanted to show you guys a couple of really interesting statistics related to people with disabilities. There's 12 million people out there, 40 years and over, that have vision disabilities, including 1 million people who are blind. There's 48 million people out there who have hearing impairments, 39 million people who have motor impairments and six and a half million people who have cognitive impairments. So the people are out there, the disabilities are prevalent, and they are there. Now how do we identify whether our document is accessible or not? Well, one of the ways that we can do that is to leverage the guidelines set forth in the Web Content Accessibility Guidelines. And WCAG breaks down accessibility into four main categories, which is what they refer to as the POUR principles: perceivable, operable, understandable, and robust. And by following these criteria within the WCAG guidelines, there's 13 guidelines and 78 criteria that define what makes a document accessible.

(20:35):

So I like to show people this. So the slide that I have up right now has a lot of useful information in it, but I don't know about you, when I look at this, I immediately don't want to read it because it just looks like a lot of work. It looks like a lot of energy I've got to put into this to consume this information. So what do we do to make information more appealing to users? Well, one of the things we do is we organise that information in a variety of different ways. As sighted users, we use visual cues to separate the data. We use headlines, photos, graphic borders, white space, columns, font size, and different fonts. All of those

things combined help us. And I use a newspaper. I know I'm showing my age when I do that, but it could be an online article as well.

(21:42):

It doesn't really matter. But a newspaper is a classic example of how information could be organised to make it more appealing. And again, by adding headings, by varying the weight of the font, we make certain information more important or more attractive for somebody to read. From an accessibility standpoint, those same visual cues that I was just describing to you can also be defined in a document or webpage to make it accessible. And the way that we do that is by leveraging tags in a PDF file. Tags are a critical component, and it's what allows us to make a document or a webpage accessible. And we do that by adding heading tags. We do that by tagging content as a figure. We do that by tagging content as a list. So just like as a sighted user, I rely on those visual elements, a user of assistive technology relies on a similar thing to be able to identify what an item is. Okay?

(23:08):

So one of the WCAG criteria, and don't worry, I'm not going to put many of these up here, but one of the WCAG criteria is called 1.3 0.1 Info and Relationships. And it's a very, very important criteria because it's really the foundation on what accessibility is based on. 1.3.1 says, "Information, structure and relationships that are conveyed through presentation so that are conveyed visually can also be programmatically determined." And what that means is that when I'm reading the document using assistive technology, it lets me know that I'm reading a heading. It lets me know that I'm reading a list. It lets me know that I'm reading a figure so that I know what everything is.

(24:01):

Adobe InDesign, and I'm going to demonstrate this to you, gives me tools that helps me make a PDF created out of InDesign accessible. InDesign gives us a tool called the Articles panel, and there's another WCAG criteria that's also important called Meaningful Sequence. And Meaningful Sequence simply says, "Make sure that when this content is read, that you're reading it in a logical order that makes sense to the user." And InDesign allows us to satisfy that requirement using the Articles panel. Now, this can also be done by threading text, right? We all know in InDesign we can flow text from one frame to the other. That's another way that we could define the tag order. It's just that not all documents require text to be threaded. So we need another method that we can make that happen. Then one of the more frustrating things about the PDF format is that there are actually two orders that you've got to contend with. Sorry about that guys. Sorry for the balloons.

(25:18):

There are two orders to contend with. There's the tag order, and that's the order that the main assistive technologies use. JAWS and NVDA, they use the tag order as the order in which content is going to be read, but there's also something called the reading order and other assistive technologies will sometimes use them. Okay. Alright, so here's the Articles panel. Again, we'll get to that a little bit later. The Articles panel in InDesign controls the tag order, the Layers panel controls the reading order. And to make things a little bit more confusing, in the Layers panel, you have to organise content from bottom to top in the Layers panel to equal reading order from beginning to end. And it might sound like it would be hard to do, but it's really not that bad it, it's really not too hard to do. So what I often tell people when I'm making documents accessible, I work under the 80/20 rule, which means I do 80% of the work in InDesign, and then I know that I'm going to have about 20% of cleanup to do after the PDF file has been created. Now, there are plug-ins for Adobe InDesign. The plug-in that I use is called MadeToTag. And I would say that MadeToTag changes this rule to about 95/5. So now I only have about 5% of cleanup to do after the PDF file has been created.

(27:03):

Alright? One of the very simple things we all can do to make our content more accessible is that when we create hyperlinks, make sure your links contain meaningful text. And I think a lot of us have strayed away from this, but you guys all remember a time when every hyperlink said click here or download here, or more info. That doesn't tell us much about where that hyperlink is taking us. So if instead we use meaningful text that says, "download the 2024 annual report here," that makes that link much more definable. We know where that link is taking us and we know where we're going to go. Alright guys, so that's all the slides I have for you. I'm going to go ahead and now switch over to a PDF file that Guy was kind enough to share with me. Let me move this over here.

(28:23):

So here we are looking at an actual PDF file and I want to talk to you guys a little bit about, okay, great, but how do I know that this PDF file is accessible? How do I even know that I'm even somewhere close? Well, if you open your PDF in Adobe Acrobat, you will not be able to do this in Adobe Reader, but in Adobe Acrobat over here on the left, and I should give you a little bit of a disclosure, I am currently fighting the new Acrobat interface. You'll notice on my screen I'm using the old Acrobat interface because I'm old and I like the way it used to be, but I've been told that in the near future, the old Acrobat interface is not going to be an option. So I probably need to try to use the new interface, but regardless of which interface you're using, if I open my Tags pane, so in my case it's over here on the left, if you're using the new Acrobat interface, it'll be over on the right.

(29:47):

Okay? And when you open the Tags pane, you're going to see that there are a bunch of tags in this document. And if I click on the first tag, it's kind of hard to see here, but it's actually highlighting the big figure on this first page. But if I hit the down arrow, it'll highlight the next tag. And what's nice about Acrobat is that as you highlight a tag, it highlights the object on the page. So you could see what element is associated with that tag. And you can see here this is tagged as an H1 or a heading level one. Heading level one basically means this is a very important heading. It's a level one primo heading and it has great importance. And then as I start going down through the tags, you can see when I get to the next page, this is an H2, and then I have a table of contents, another figure here, and then I get to another heading.

(31:00):

And so as I go through here, I'm just looking to make sure that everything that's important is tagged, and I'm also making sure that everything is being read in the correct order. And by doing this, this is a step that my partner and I refer to as "walking the tags tree." And "walking the tags tree" is simply a step that we perform that basically says, I'm going to walk through the tags, I'm going to make sure that everything is tagged correctly and I'll make sure that everything is in the correct order. And by doing that alone, you are well on your way to ensuring that your document is pretty accessible.

(31:48):

Now, the thing we need to remember when we're making our content accessible is that when we get to figures, figures fundamentally don't have any value, right? Figures, all assistive technology knows is that it's a figure that's really all it really knows. And so we need to describe those figures. Let me find another figure that we can look at here. Here we go. So in the Tags pane, I can right click on this figure and choose properties. And you will notice that on this figure, there is something we've added called alternate text. And alternate text is how we describe figures so that the user understands what the image is about. So that's a requirement when we're making our content accessible. Now, the other way that we can check to make sure that our document is accessible is to actually test it using a screen reader. And I'm going to show this to you because I think it's a really valuable thing for us all to know what the experience is for somebody who's using assistive technology. Now, all of the popular assistive technologies out there are Windows only programmes. So me being a Mac user, I have to run Parallels on my machines so that I can test appropriately. But I'm going to use a product called NVDA. NVDA is a free, actually it's donation ware, but fundamentally it's a free assistive technology tool.

NVDA (34:06):
Welcome, use, okay, button, sustainable.

Chad (34:11):
Just to double check with everybody, were you hearing it voice?

Audience (34:16):
Yes.

Chad (34:16):
Yes. Okay. Thank you so much. So again, so I'm going to kind of create a connection between how we as sighted users read and how people using assistive technology read, right? So as a sighted user, typically when I read a document, what's the first thing we do, right? When you're reading a document, do you just kind of start in the upper left hand corner and start consuming the information, information top to bottom? Or do we scan the headlines? And so using assisted technology, I can do the same thing as a sighted user. I'll scan the headlines, see what the information is about. Users of assistive technology could do the same thing on my keyboard. I'm going to press the H key to read the next heading.

NVDA (35:17):
Page one, sustainable development goal slash slash 2022 to 2025 heading level one.

Chad (35:25):
Okay, do you hear how it told me it was a heading level one? And testing with a screen reader also makes certain things apparent to us because in this heading, they used two slashes as a visual element, but those slashes are read. They are actually read by assistive technology. So not a great user experience, but not a barrier either. Now if I press the H key again..

NVDA (35:57):
No next heading.

Chad (35:59):
Okay, hold on, I got to jump to the next page.

NVDA (36:01):
Alert, empty page. Heading level two, page three, contents. Link, link, link. Sustainable development goals.

Chad (36:10):
Right? It already read the heading for me. Let's go to the next page.

NVDA (36:14):
Heading level one, page five, sustainable development goals. The Sustainable Development Goals, SDGS, or global goals are a collection of 17 interlinked global goals designed to be a blueprint to achieve a better and more sustainable future for all.

Chad (36:33):

I will tell you all, when I use assistive technology, I read super slow. I am not a native screen reader user, but if you ever hear somebody who's a native screen reader user, the speed at which they read the content is unbelievable. You'll be lost in three seconds. I mean, it's really, really amazing how fast they can read through that information. Let's, here we go.

NVDA (37:05):

Heading level one, page six, overview, reviews of indicators, heading level two. Targets and indicators, heading level two. Reviews of indicators, heading level two.

Chad (37:17):

So that allows me to navigate through this document. And if I want to know more about the reviews of indicators, I could say cool, read on from here.

NVDA (37:28):

Heading level two, reviews of indicators. As planned, the indicator framework was comprehensively reviewed at the 51st.

Chad (37:37):

Again, I'm not going to make you guys listen to all of this, but I hope this is helpful for you guys to see like, okay, I understand accessibility, I understand users are going to consume this content in a variety of different ways, but I think it's also helpful to know how users of assistive technology are going to read this information. So hopefully that helps you guys, hopefully that..

NVDA (38:07):

Find okay button.

Chad (38:13):

There we go. So in InDesign, right? I mean of all the applications that give us the ability to make content accessible, InDesign, and again, I am biassed, I love InDesign, I use it every day, but InDesign gives us the controls that we need to actually make this happen. So if I click in this text down here that says Sustainable Development Goals, we could see, and again, the other thing I want to remind you of, the connection between the tag that's going to be created when we make a PDF file and the content in InDesign is the paragraph style. And a paragraph style gives us the ability to tell it what tag it should be connected to. So this is using a style called Cover Title. If I right click on Cover Title and choose edit, and I come way down here at the bottom where it says export tagging, you'll see a category here called PDF, and there's a dropdown menu for the tag.

(39:34):

And in there we're going to find all of our heading tags. We're going to find a paragraph tag, and we're also going to find the ability to artefact if we choose to. Now in this case, because it's a very important heading, I'm going to say go ahead and tag that as an H1. And by doing that, any text in this document that's using the Cover Title style is going to output as an H1 when I export to the PDF format. Okay, let's go ahead and scroll down a little bit. Here's my table of contents heading. That's using a style called TOC Title. And if I right click on that and choose edit, I could go to my export tagging and say, okay, let's make that an H2.

(40:29):

And by doing that, that is allowing me to structure my content in this document so that when it exports, the tags are just automatically there and that's going to satisfy info and relationships as we talked about a little bit earlier. Let's just do one more here. Here's another one. This is a style called H1 or heading one. And so I can click on this and choose edit, and I can map that, that's actually already mapped to an H1, and then I can click okay. It is a common misconception, and I'm sure as I said that some of you were like, wait a minute, Chad, somebody told me that I can only use one H1 per document. Has anybody ever heard that? I don't know if I can see people putting their hands up. Yeah, you've heard that, right?

Audience (41:26):

Yeah.

Chad (41:27):

That is not true. There's literally nothing in the WCAG criteria at all that says you can only use one H1 per document. Now, you could choose to, that could be your preference, and that's totally fine. It's not going to be good, bad, or indifferent, but just know that it is absolutely okay to have more than one H1 per document. And even though I called this style Heading One, there's nothing saying that I can't map it to an H2. I can really do whatever I want there. Alright? Now the other thing we talked about real briefly, sorry, I'm trying to be cognizant of my time. I want to give a little bit of time for Q&A at the end here, but just talk about a couple more things and then I'll release this to everybody.

(42:29):

If I click on an image, remember I was telling you how all of our images need to be described, right? We need to describe our images so that again, users of assistive technology can experience what that image is about. And in Adobe InDesign, the way that we do that is if we come up here to our object menu, we can choose Object Export Options. And under the alt text button you'll see that we can set our alt text source to be custom. And when I do that, I can then type in how I want this image described. So you can see here it's saying a top down view of pots with seedlings growing, and we're just kind of trying to describe that so that users can experience this as well.

(43:29):

One of the really cool features of Adobe InDesign, because I always say somewhat tongue in cheek that as a graphic designer, I'm the worst person in the world to be writing alt-text for figures in a document. There are people who are way better at that than I am. Authors, editors, copywriters, all of them are going to be way better than I am, but because of what I do, I often have to do this. But one of my favourite features of Adobe InDesign is that instead of manually typing the alt-text, I can grab the alt-text from a metadata field in the image. Now that doesn't have any, yeah, so if I grab the description field, see how it automatically populated that information? And that's because it's grabbing it from the metadata field of the image. And a year ago, because we just had Adobe MAX, so last year at Adobe MAX, they added a new feature where they added a metadata field literally called alt-text.

(44:45):

And now in all of our photos, our graphics, Illustrator, Photoshop, we have an alt-text field where we could type the alt-text for our images and kind of automate this process, which is pretty cool in my opinion. Alright, now the last thing I wanted to show you, I alluded to this, but in Adobe InDesign we have something called the Articles panel. And the Articles panel has one job in life, and that is to define the order in which content should be exported in the PDF file. So the Articles panel is very simple tool. You literally grab the first thing you want read, drag it and drop it onto the Articles panel. And Adobe InDesign wants to create a new article and by default it's called article one. An article in a tagged PDF is what we call a container tag. And container tags are not voiced by assistive technology. So it really doesn't matter what you call it, if I'm being honest. I just usually leave it set to article one and be done

with it. I just don't care. And then if I want to add this figure, I could drag this up here, then I could go to the next page, I can grab, oh, that figure is being artifacted. I'll add this.

(46:19):

And I just mentioned artifacting. Another thing to keep in mind is that when you leverage your parent pages in Adobe InDesign, right? So on all of these pages, the header information and the footer information, the page number, they are on the parent page. This one, here we go. They are all on the parent page of the document. Go away please. And when you put content on the parent page, that information is automatically artifacted, and artifacting is a term that we use to describe content that we do not want to be read by assistive technology. And it is standard practise to artefact header and footer information on our pages because we don't need it to announce sustainable development goals at the top of every page. Alright guys, I hope that was a good intro, little introduction to accessibility, and I want to leave some time for questions at the end. So Lukas, back to you.

Lukas (47:42):

Cool. Yeah, thank you, Chad. Definitely learned a few things for sure. I'm not an accessibility expert by any means. So we did have a couple of questions in the chat.

Chad (47:54):

Great.

Lukas (47:55):

So if you want to pull that up, Chad, first one from Hannah Park about graphs and really complex images with a lot of information.

Chad (48:08):

Sure. Let me take a look here. Yeah, so even in my talk here, I was kind of talking mostly about photographs, but you're absolutely right, Hannah. Charts, graphs, infographics, they all need to be described. Dax and I actually do a webinar that you can find on our website called Writing Effective Alternate Text, because on paper, alternate text seems like such a simple thing. You're just like, oh, just describe this thing and it sounds super simple until you're the one who has to actually describe those elements. And you're not wrong, Hannah. I mean, yeah, those charts and graphs, they can get challenging. What my partner and I encourage people to do is ask the question, what do you want the user experience to be? And if you can answer that question, that's going to guide you in how you're going to describe those elements. What you really need to figure out is, what story am I trying to tell with this graph? What information am I trying to get to the user? And then based on that information, describe it appropriately.

(49:46):

Daniela is asking question about the alternative text. Do you think alt-text can be produced by artificial intelligence? Great question, Daniela. I think there's potential there. I really do. I've seen good implementations of it and bad implementations of it. A lot of you may have noticed in Microsoft Word, there's a button that says generate description for me. Word is horrendous. Most of my images it thinks is a picture of sunglasses. I'm just like, honestly, really that's the best you could do? But we partner with another company called Venngage, and if anybody in this class is interested, Venngage is like Canva, but can create accessible PDFs. Canva cannot, just FYI, right? So everybody using Canva, if ultimately you're trying to make an accessible PDF out of that, good luck. It's a lot of work. It's a lot of effort. Venngage gives you the ability to make it accessible. And Venngage has an amazing implementation of auto describing figures in the document and it does a pretty darn good job. So Daniela, I think the answer is yes. I think there's potential out there. I just think somebody needs to throw enough money at the problem

to do it well. You know what I mean? Because like I said, Word quasi does it but does a really bad job. Venngage does a really good job. So I think it's all going to depend on the implementation. Oh Guy, I didn't realise you had responded to her.

Guy (51:41):

That's fine. You mostly confirmed. I confirmed that Word is horrible. It does, absolutely. The idea was great and I experimented with it because Typefi, we added support for the native Word alt-text in our solution, but just,

(52:04):

Yeah, it's just like nine times out of 10 it's useless. You know what I mean? It is not even close. A lot of the time I get that it's a closeup of a sign. I'm like, that's not helpful.

(52:19):

Can do all that money and you still.. I am curious about your, because Heather's question is about equations and alt-text for, handling alt-text for equations. I am curious about MathML because I know that MathType can be transformed to MathML. Well, I mean the new implementation of InDesign uses SVG, so I am not sure how, I don't think that's very accessible, but there are tools that allow you to place. Like our solution, we partner with movemen MathTools, which allows the placement of MathML. And I do believe MathML is readable and doesn't require alt-text, at least in the browser, but I don't know how it is in PDF.

Chad (53:14):

So the plug-in that I was referring to, which is called MadeToTag, they partner with MathTools and they created a solution that what it does is it adds a comment in the PDF file with the MathML in the comment.

Guy (53:37):

Nice.

(53:38):

Now it's not perfect because the user basically needs to copy the MathML, paste it into a MathML reader in a web browser, and then they can in turn interpret and read it in a way that makes sense to them. But I've not seen, that's the only solution that I've seen that seems to deal with formulas pretty elegantly. I mean, the other alternative is you can tag your formula as a figure and write alt-text for it, but similarly to regular alt-text, you definitely don't want me describing your formula. I would be like, squiggly line, number two. You know what I mean? I have no idea what it's supposed to say, but I think you would need the assistance of somebody who understands formulas and could express it appropriately.

Hugh (54:45):

This is an area where we may be able to bring two of these comments or two of these questions together. So one of the issues is the MathML that can come out of InDesign into PDF as you note, can't really be read by any screen reader at all. So we're going down a path of using the movemen MathTools to generate equation content with the MathML alt-text it exports, and then applying AI to take that MathML and to turn it into descriptive alt-text. There's no out of the box solution that does that, but that's where we're stuck is neither the MadeToTag solution, nor the movemen solution gets us to a place that actually provides a good user experience. So there's that added layer of PDF post-processing to get to equate descriptive equation alt-text from the MathML. It's not great, but it's where we are.

Chad (55:51):

Yeah, you're right. And really the limitation is in the PDF format itself, there's just no mechanism within the PDF structure to be able to provide us with what we need. And I think that's why MadeToTag went the approach of, okay, I'm going to put a comment in here with the MathML. Again, it's usable, but I would not say it's right because the user needs to literally copy the MathML, go to a web browser, paste it into a MathML reader, and then somehow interpret that equation, but within the PDF file itself, yeah, it's a limitation for sure.

(56:46):

Thank you Lukas.

Lukas (56:48):

We're at time. Yeah, no problem. I think I got the right links to what you were talking about there.

Chad (56:54):

Yep, you did. Thank you.

Lukas (56:58):

So yeah, we are at time, so I don't see any other questions. If anybody has one, feel free to post it, but if not, then we'll wrap it up.

Guy (57:11):

if anybody obviously has any questions related specifically to Typefi, because as the InDesign file that Chad demonstrated was generated through Typefi. So if anybody has any questions around how Typefi and the level of support we have for accessibility, by all means reach out to us and then we can talk about it. I can already say we don't use the Articles panel, so we use the second option, the threaded, the threaded solution. Not perfect, but definitely the best. Yeah. So yeah, if you have any questions, do not hesitate to reach out to us.

Chad (57:53):

Yeah, yep. We'd love to hear from you.

(57:57):

Again, thanks everybody for attending. I appreciate it.

Guy (58:01):

It's awesome.

Lukas (58:03):

Yeah, thanks everybody.

Guy (58:05):

It was really good to see just the way that NVDA reads stuff, just that different perspective on how your content can be consumed. Thank you so much.

Chad (58:20):

Absolutely. Thank you guys.

Lukas (58:22):
Yeah, thanks Chad. Really appreciate it.