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>> LEXI JONES: We're going to give it another few minutes for the audience to fill in and we'll start right at 2 o'clock.

All right. I am going to start the recording and let everyone in. And then we'll get going.   
 Hello, everyone. Welcome to creating accessible PDFs. Before we get started, we'll go over the Zoom settings. The audio for today's meeting can be accessed using computer audio or by calling in by phone. If you select computer audio, please make sure your speakers are turned on or your headphones are plugged in.   
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 Questions and technical assistance, please send your questions, concerns and any requests for technical assistance to the NDI host via the chat box. Questions will be addressed by the presenter if time allows. If you would prefer to ask your question in ASL, please raise your hand and wait to be called on by the host. If your question is not answered during the webinar, you are listening by phone or you are unable to use the chat box, please e‑mail Alexis Jones at ajones@ndi‑inc.org.   
 Please note this webinar is being recorded and the materials will be available at www.disabilitysmallbusiness.org on the past events page within one to two weeks.   
 Welcome to creating accessible PDFs presented by Results One LLC. At this time I will turn it over to Citlali for the presentation.

>> CITLALI RIOJA: Thank you, Lexi. Hello, everyone. My name is Citlali Rioja. I will be presenting today. I am a Latin person. And I go by she/they. We are going to go through what is really important for accessible PDFs. And thank you, Lexi, we are going to go for common PDF usage. PDF advantages and disadvantages because there are many.   
 Use of tools to check PDF accessibility, creating a workflow to learn how to approach the process of making a PDF accessible, and then making a PDF accessible. So we're going to go from the bases of it to the reasons to how to actually do it.   
 Next slide, please. So what is an accessible PDF? So an accessible PDF is a document that is universally easy‑to‑use, and meets established accessibility standards. This can be WCAG, Section 508. It depends on what you are authoring for. It does enable most people to view, read or interact with your document.   
 Now it is easy‑to‑use with assistive technology. This can be screen reader, text‑to‑speech programs or Braille displays. We are going to go in to what needs to be done to make PDFs actually understandable for assistive technology a bit later on.   
 Next slide, please. Why is PDF accessibility so important? Unlike a sighted user who physically views and reads the PDF and their content, a user was non ‑‑ with visual impairment or other disabilities such as colorblindness, hearing loss, certain cognitive challenges, relies on tools to read the PDFs. If a PDF is not made accessible, a screen reader does not read as it should.   
 For example, if a PDF is not accessible, a screen reader will not be able to read it at all. It will appear blank, prevent users from fully accessing the information continued ‑‑ contained in the PDF document. Now your goal is to make your PDF accessible to as many people as possible. Next slide, please.   
 Common PDF usages, so PDF usually are technical documents and manuals. Let's say when you buy a TV you might get an e‑mail with a manual or any type of program there. It is for reports and especially complex layouts, graphs and charts are usually included in PDFs. It can be forms or any type of printing form or just online delivery forms.   
 It can be for scans. Just scanners or other hardware output in PDFs. It can be for print and design industry which is very comfortable. And it could be large and complex documents that can be published in your websites. So if you have any economic reports, that might be too lengthy to be made a Web page. A lot of solutions just make it a PDF and upload it to the website so it can be accessible through there. Next slide, please.   
 The most common PDF accessibility barriers, now there is a lack of ability in navigation, navigating the document to find what is needed. So a lot of people don't really use either an index or bookmarks.   
 So there is an issue finding what you want.   
 There is the incomprehensible tables. So tables that cannot be read at all. There is text not ordered correctly or not spaced properly. So we get a wall of text effect. There is a lot of words that might be unintelligible or jumbled together.   
 There is no alt text for images, charts or graphs. There is an inability to interact with fillable forms which defeats the purpose of them. And some scan documents that have no content, and must be OCR'ed resulting in accessible documents. And documents having no structure at all.   
 Next slide, please. So PDF advantages and disadvantages, we're going to start with the advantages. No. 1, PDFs are designed to be structured in such a way that allows remediation to be simple. So from a structural level without any excessive need to make the visual change. So if you have any issues, if your PDF is not accessible, but it looks good, you are happy with how it looks, chances are you don't really have to change it that much.   
 No. 2, the ease of modification for PDF, for navigation within the PDFs. So again navigation can be modified through a background type of device in order for you to make it accessible. You won't have to make a lot of visual changes.

No. 3, if the source document you have is accessible, then making the resulting PDF accessible is so much easier. So if you start thinking about accessibility from the authoring system, your PDF will be much easier to handle.

Now let's go for disadvantages. No. 1, security can be a negative from an accessibility point of view. A secure PDF might interfere with screen readers and automated testers.   
 So a lot of automated testers will flag your PDF as not accessible if it is secured. However, you ‑‑ we also recommend a manual test. So a person with a disability might be able to test it and see if a screen reader can handle it. No. 2, PDFs can be composed solely of images. But an image still requires alternative text. And without the alternative text a lot of PDFs are just empty. Next slide, please.   
 We're going to get in to making a PDF accessible. There are some important steps to consider. So first things first, we're going to see how to use tools to check PDF accessibility. Thank you, Lexi. So first things first, we do test for automated, manual and we also always test with assistive technologies.   
 There are automated accessibility checkers. Acrobat Pro, they are getting better each year. If you don't have access to that you can go to Axes PDF. Common look, those are two separate tools that specialize in PDF accessibility, in document accessibility. A big note here is that any test, any automated test would be against WCAG 2.0. A standard that could be considered outdated at this point since we are in WCAG 2.1. But PDFs were added in WCAG 2.0. So that's still considered legitimate. It is always good to keep an eye on that if you are using any type of accessibility tester, especially for common look. That does give you the option to pick what you are testing against. If you are using something like Acrobat Pro, you will be getting WCAG 2.0 right off the bat. You will not have an option to choose.   
 Next slide, please. We're going to go to acrobat imbedded accessibility. Acrobat is where PDFs are mostly read. You can go from choosing tools, heading straight for accessibility. There is an accessibility toolset that will be displayed in a secondary toolbar. You can select in the toolbar a full check or an accessibility check. In that toolbar you will also find how to auto tag a document. You will find reading order options, accessibility checks. You can identify form fields and you can set up alternative text from there.   
 It is worth mentioning again that you will need Acrobat Pro in order to run an accessibility check. So there is a cost to this.   
 Next slide, please. We're going to create a workflow to make sure that you are drafting a ‑‑ your drafting program can be used to its maximum capacity. So in design for anyone who is a visual designer or who is a graphic designer or if you are just making documents with a lot of text, they both have a tagging system. And using this tagging system it can be made accessible.   
 This file let's say you have a file, it is a menu. You have made it. It is wonderful. You are working at a restaurant. If you do use tags beforehand, once you convert this menu in to a PDF the tags will transport. So you will already have a PDF that is at least readable by screen readers there.   
 Once you have a PDF you can go through it using assistive technologies and you will ‑‑ and this will give you an idea of what you have to correct if everything is in the correct order for reading, if everything is tagged correctly, if all of the images have alternative text.   
 Next slide, please. So we do have an example workflow here. So first things first, we go for content generation. This is the concept. This is the colors. This is anything that comes from picking images. Anything like that.   
 We go for our first review using a checklist. This can be made out of WCAG 2.0 or it can be from Section 508. Again it depends what you are authoring for. If you pass, great. If you don't, then you have to go back to the beginning.   
 Pick again. Again, if you are using in design, you have your in‑design draft generator, then you have your second draft. You go back, do your second accessibility review. Again if you pass, good. If you don't, go back and start again.   
 Now this is where descriptions for complex media come in. This is where you will write your alternative text. This is where you will make sure that all your tables are tagged correctly.   
 You can at a new provided content. It depends if you have any images that needed to be changed, needed to be made accessible. But if the PDF is made correctly, let's say you export it as a PDF, then you have your final accessibility review either with common look or with a PDF automated checker. If it passes, then you are done and you are ready to publish. If it doesn't, then you have to go back.   
 It is very circular but we do always recommend breaking it up. So it isn't so heavy. Next slide, please.   
 So we have exported PDFs. You can make a PDF accessible from the start by ensuring that the file is accessible from the authoring software. These checks function great for very simple PDFs. However, complex PDFs that might contain several charts, several tables, several forms, et cetera, might need a second look for confirmation. Especially if it is the first time you are making a table accessible or if the table is nonstandard, you might need to ask someone with experience. So for next slide, please.   
 We are going in to what is OCR or Optical Character Recognition. This is something included in Adobe Pro again. So OCR can recognize scan text and convert it in to actual text. It can read the results in order to ensure that it is correct. However, we always recommend you read them again to make sure that the text isn't either mishandled, misspelled, some things can get lost or if the documents scanned. If it is an old book and it has stains on it or if there is something that is kind of wrong with the scan that you have, sometimes names and text can get lost. So we always recommend doing a manual check and making sure that everything is all right.   
 This is usually how documents that are only images. So this can be scans of a very old textbook can be made accessible. Next slide, please. So you need to set the correct reading order with tags. Every document needs to be tagged in order to be accessible. A tag will tell you what is text, what is an image, what is a form, what is a number. So this tag will basically guide a user through your document. Through its content. Text can be created by automation again. It isn't always right. So we always recommend to check your tagging system.   
 If it occurs that the tag isn't correct, you can always change the tag name or you can change the order it comes in through the tag 3. So tagging a document will create a tag tree. Representing the structure and the components, this tag tree is mostly perceived by screen readers. So this is where any type of screen readers will happen to find an error or if there is an empty field there that you hadn't noticed, again check your tag tree and make sure that it is.   
 A PDF must be tagged in order to be considered accessible. You can check if your PDF is accessible going through your preferences. And it will pop up there.   
 Tags can be edited using a tag panel. So you can go from choose, choose view, show/hide, then the navigation panel. And then the content. Next slide, please.   
 How do you edit a tag? Again text can be edited using a tag panel. You can choose view, show/hide. Navigate the panel. And then go for the content. You can manually drag‑and‑drop the tags. But we always recommend doing it with your keyboard. Because sometimes when dragging and dropping you can put a tag in to a compound, in to a chain that you don't want it in. And your reading order can be ruined. So be very careful when you are changing your tags.   
 Next slide, please. We are talking about tagging tables. This one is a bit hard. And if you feel overwhelmed at first, don't worry. It does get better. You do require practice. And we always recommend either having a cheat sheet or an image that lets you know how to tag them, like the one we have for an example. So you can open the reading order tool from the accessibility menu. You can find and correct tag tables within the document. This can be done by scrolling or if you are in the page that you want tagged, you can just text the number of page and it should be tested there. You can select all elements that should be included in the table. So sometimes a lot of the table content can be excluded. If you are tagging automatically with a right click or opening a menu, on selection you can select the tag as table. We are going to talk about the example in the next slide. So next slide, please.   
 Tagging tables as I mentioned is hard. So in each table, there should be a table tag. Which once it is expanded will show the TR which are for table rows. TH for table headers. This can be any type of cells, and should only be for the first TR of the table. So for the first table row.   
 You have TD which should be the table data cells. These are the data, where everything is set up. The cells span two or more rows or columns, should use row span or call span depending on where they are situated. For tables that contain blank cells are sometimes used for spaces, to make it easier to read, especially if you are a visual reader. You may need to add a TD cell so that each row and column has the name ‑‑ number of cells. This should make it easier for anyone who is using a screen reader to understand them. Next slide, please.   
 So this is our example and this is what you will find wherever you are tagging your tables. It is the table as a whole. Then it would be a table header row. So that is a TR. And then a TH for each table header.   
 Then there is a table row and then there are the table data cells. Each one of them contain unique data. Again, then again we have a table row, a table data cell. So we have table, TR. TH. TR. TD. TR. And TD. This is why we always recommend having either a cheat sheet with what the table means, and what every abbreviation means to make it easier. Remembering those are hard and sometimes what is a table header, should this count as a table row or a table data. Really does need some practice. And again if your table is too complex and you are having issues, then ask help from a professional.   
 Next slide, please. We're going to talk about tagging forms. A lot of people with disabilities would find that whenever you get a PDF with a form you can't actually find the field or the form. So you don't know where to write. So when acrobat adds a form field automatically, it also automatically adds a name and tool tip to it.   
 To each field based on text near the field. So if you are adding a name, then you have a name space. You should review each tool tip. If you add a field manually, the tool tip will be blank. So with the ‑‑ with the prepare form tool group open, you can right click. You can access the menu dropdown, and then you can add a form field and then choose properties. Make sure that the text in the tool tip conveys all the information a screen reader needs and completely ‑‑ the complete field. So then correct if it is not. So it might be empty.   
 Next slide, please. We're going to give an example and a visual for this.   
 So you must make sure that forms are tagged and are still functional after being tagged. Make sure that they are in the correct order in the tag tree. Then make sure that instructions are clear. Do not rely on any visual input to complete it. So input like color and directions using right or left are not accessible. If you say that every form field that is red is required, that is not acceptable. A lot of people cannot interpret the color. They might be colorblind. A lot of people do not have the visual input to understand if anything is a different color since screen readers will not let you know if anything is a different color.   
 So things like if the required fields have a star next to them, then that is a good instruction. And then again, you need to make sure that the name first field and the tool tip are actually matched. So if you have their name, first name, the tool tip should be first name. Next slide, please.   
 You need to set alternative text. We have spoken about how to write alternative text before. But in PDFs it is important to consider that complex images like charts might need a description instead of alternative text.   
 Additionally always make sure that the alt text is accurate. Sometimes if you are using automation, alternative text might already be set there and might be incorrect. Any decorative images should not have any alternative text at all. And should be removed from the tag tree. So you can make them invisible. As an example, you will have a decorative figure checkbox for the options. And you will have a field to write your alternative text. We always recommend alternative text to be around 100 to 250 words if possible. But again if you have a very complex image that has charts on it, then you might need to write a description under the image.   
 And not use the alternative text. Next slide, please. We want to test with color and contrast. So color and contrast rules are the same for any type of alternative media. If you are using WCAG 1.0 or 2.0 or Section 508, you have the same rules. 12 points and up, the color contrast should be 4.5 to 1 in contrast ratio. For large text, which is around 16 points and up, the contrast should be three to one contrast ratio. So coloring contrast rules still apply to all elements. This can be images you want to describe, any type of chart, any type of decoration. It can be the color of the text that you have, the color of the background, any type of visual medium, any color, then you include in your document should be by these guides.   
 Next slide, please. We have text resize. Any text must be resizable up to 200%. This is very easy to test. You can open your document and try to see if you can zoom to 200. If any text is lost or if the document becomes ‑‑ comes out of order or if it is hard to read then or hard to understand, then your document is not accessible.   
 As mentioned, regular text size is considered from 12 points as a minimum. And large text is from 16 or 18 points and up. Next slide, please.   
 Do remember to remove your notes. This is important. Sometimes when you are navigating and when you are downloading a very important PDF from a very serious organization, you might find the edit notes and screen readers can definitely find them. An accessible PDF cannot have notes left from previous reviews or embedded speaker notes.   
 Screen readers can understand them. But it is common for them to cause a keyboard trap. So they might actually cause a user to become stuck there and not be able to go on and read the document. And can be ignored. So sometimes there is just a skip. It really does depend on what type of screen reader your users have and what type of reader they are actually using to open your PDF. And they do not belong in the tag tree. If you find any type of notes you can remove them.   
 Next slide, please. So we're getting to the final points of how to make your PDF accessible. You need to set up your bookmarks. This needs to be done as a penultimate step. If your tag tree was made correctly, then automated bookmarks should be accurate. But again you need to compare them manually and always review them to make sure that everything is covered, that nothing is lost.   
 You can edit your bookmarks. So keep that in mind if there is something that you want to draw special attention to, or something that you think this should be a title or a subtitle. There must be bookmarks from any document that is over nine pages. So if your document reaches nine pages, please add bookmarks. As I mentioned, this should be done penultimately because it takes information from your tag tree. If you are absolutely sure that all your tags are made correctly, then you should have no problems with your bookmarks.   
 Next slide, please. Final step, you need to set up your metadata. Now this is your title. Your author. Your subject. Any type of key words that you want. And your language. This is where you will make sure that every PDF is tagged. And you will see if it has any type of security measures. So documents over five pages must include a number page that can be added automatically. And metadata will be ‑‑ will always help with your SEO. So that's your search engine optimization.   
 If you have everything set up for accessibility, search engines will basically find your document easily. You can find this in Adobe Acrobat. You go to file. You go to properties and then you go to description.   
 So for key words they can be anything, taking an example from our chat, from this talk, it can be accessibility. It can be PDF itself. It can be any type of subject that you have. Anything that calls to attention. Think of hashtags in social media. This is exactly the same. It will make search engines have more access to you and it will make finding this information easier.   
 If you head to security and you want to make sure that everything is written correctly, then security should actually be lax. Nothing should have a password on it. And the document should be accessible there. If you go to advanced, you will actually find if the language is there. And it should be set up for ‑‑ if your document is in English. It's always good to make sure and check those last steps. Next slide, please.   
 So this is an offer from us to you to learn if your PDFs are accessible. You can send one PDF to kalfonsodc@resultsonellc.com for a free automated audit. We will get back to you and let you know what's up. And we will actually have a meeting. Next slide, please. We have gotten two questions. If anyone has any questions right now, please let us know.

>> LEXI JONES: Thank you. This is Lexi. I don't see any questions in the chat yet. Participants are still welcome to type in a question if you have one. Or raise your hand if you would like to ask your question in ASL.

>> CITLALI RIOJA: I know we just hit you with a lot of information. So you might need a moment.

>> LEXI JONES: That's true. It is a wonderful presentation, Citlali.

>> CITLALI RIOJA: Thank you.

>> LEXI JONES: Why don't we let Ruth go ahead and go over the next few slides. We can always come back if there are any questions. Cheryl just asked if the presentation will be available. And it will be on our website in one to two weeks. And I will pop that link in the chat in just a moment.

>> RUTH CHAVEZ: Thanks, Lexi. We can go to the next slide. So our upcoming events that you don't want to miss out on, funding your business is going to be presented by Griffin‑Hammis Associates on Wednesday, June 21 from 2 to 3:30 p.m. Eastern standard time. We will have Citlali and her team come back and do another training on creating accessible e‑mails and that's going to be on Wednesday July 12, from 2 to 3 p.m. And following that we will have a training on net earning from self‑employment and SSDI/Medicare which will be presented by Griffin‑Hammis Associates on Wednesday July 19, from 2 to 3:30 p.m. Eastern standard time. Next slide.   
 And just a little bit about the National Disability Institute's small business hub. If you are an aspiring entrepreneur who is in need of assistance in helping start or build or grow your business, feel free to reach out to us. We have several resources and we can offer consulting and training, specific to your needs. You can visit our website at www.disabilitysmallbusiness.org or you can e‑mail rchavez@ndi‑inc.org.

We are looking for applicants for the upcoming financial health program. If you are interested on learning more about topics, feel free to click on that link that will be provided in the e‑mail with the presentation for today. Or you can e‑mail Caroline Bolas for more information. Visit our streaming TV channel, disabilityowned.com where you can find interviews and informational webinars and trainings on entrepreneurship and small business startups and growth.   
 We have also partnered with Verizon to spread the word on accessing training, mentoring and coaching through a new small business digital ready platform. This resource is free. And you will be able to also access the opportunity to apply for a $10,000 business grant. So that link will also be provided as well.

And if you have not signed up for the mailing list, feel free to join us so that you are up to date as to the upcoming opportunities or any grants that come up or any new webinars or trainings that you won't want to miss.   
 And next slide. And then this is just our ‑‑ a slide with all our pictures of all our team. We have Nikki Powis, the director of the small business programs, myself, Caroline Bolas, the small business specialist and Alexis Jones, small business project coordinator who makes this all possible. And with that, I will pass it over to Lexi to close us out.

>> LEXI JONES: Absolutely. So I haven't seen any more questions come in the chat. If you do think of a question later, you can always reach out to Results One. And we did put Kim's e‑mail address in the chat. I will also send everyone a follow‑up e‑mail by the end of the week with all of the links we shared and information about our upcoming events.

So thank you, Citlali, for your time to go through this detailed information. And thank you, everyone, for attending.

>> CITLALI RIOJA: Thank you. Thank you for coming. Thank you, Lexi. Thank you, NDI.

>> LEXI JONES: Take care, everybody.

>> CITLALI RIOJA: Bye.   
 (Session concluded at 1:43 p.m. CT)

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