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>> Johan Rempel: Good afternoon, everyone. This is Johan Rempel from center for inclusive design and innovation. Today's presentation is entitled creating accessible PowerPoint presentations by Dr. Valerie Morrison. And thank you all for making time for this. I know we're all coming out of the holiday season. I'm sure your in boxes are full of to‑dos. This will be archived and sent over to Allie McDougall and she is going to be able to distribute this. So, whether you want to go through the PDF afterward or the recording, it's up to you and we'll provide a transcript of this presentation as well.

A big thank you to Heather for providing live captions. If you attended previous ones, there's two ways of accessing captions. One is through the StreamText link that Heather has dropped into the chat room. That opens up a third-party application. The second method is to click on the closed captioning option on the bottom right. There's a big red arrow pointing to the CC option on the zoom tool bar.

This is something that's been mentioned previously. It's worth bringing up here with Zoom it has the possibility of spotlighting or pinning. If you have an ASL interpreter and you have individuals who are deaf or hard of hearing who would benefit from ASL, that's something that you can highlight through the spotlight feature. Pinning is an individual feature that a person can access and control within their own Zoom environment. And it's pretty easy to access these functions. You hover over the participant you want spotlighted or pinned, choose the dot, dot, dot and make your selection there.

We are with the College of Design at Georgia Tech. We provide a number of different services. Some of which you'll hear more about in the future. Some of them you have heard about. A big thank you to Valerie for providing a few presentations at this point on various options related to e‑text. You'll hear more about captioning and audio description services in the future as well. We do provide accessibility evaluations, technical assistance and an entire braille department as well that we provide services through that.

Also our Tools for Life team that focuses specifically on assistive technology solutions.

The goals for today are to cover the basics of Microsoft PowerPoint accessibility using a quality control checklist and to look at specific examples together and discuss how these can be made more accessible. With that I will pass it on to Dr. Morrison.

>> Valerie Morrison: Thank you so much, Johan. I appreciate it and welcome, everybody. Happy New Year. Thank you for joining us today. I know we have all stumbled back into our offices from a much-needed winter break. I appreciate your time and attention today and hopefully what we'll go through will give you the basics of Microsoft PowerPoint accessibility and leave you with some helpful resources so that you can go through this check list on your own after the training and tackle these issues in your own slide presentations. So just about myself, I used to work in the university setting and got my doctorate in literature. A lot of lessons I learned as an instructor helped me with these trainings. How to produce educational content and convey it hopefully in an effective manner. My writing and editing skills teaching writing helped with accessibility. There's a lot of writing involved in writing alt text for images or describing things well. So I used to be an instructor of English literature. Now I work in the e‑text team at CIDI. As an e‑text manager, my team and I are often specializing in remediating course content for students in higher ed. We get orders for text books that a student needs in an accessible file format and we find a way to make it accessible.

We have a lot of students who come to us with all different types of disabilities. Some are blind or low vision. Some have reading disabilities such as dysgraphia or dyslexia. There are often students who have ADHD and need a screen reader to help them focus. People who cannot hold a physical text book and need a digital version. So all kinds of students come to us and ask us to transfer content from print medium to a digital accessible medium that a screen reader can read aloud to them and it can be navigated.

So, what we're going to focus on today is Microsoft PowerPoint accessibility. I know there are different ways that you can create ‑‑ I will ask people to mute their microphones. Thank you. We're going to go over Microsoft PowerPoint accessibility. In terms of slide creations, Microsoft has wonderful built‑in tools to help you make accessible slides. Some free open-source software or something like Google slides are a little bit trickier and you have to use work‑arounds to make them accessible. With Google slides you might need to use a specific browser with a specific screen reader in order to get the best results. So we really recommend PowerPoint in terms of best practice for accessible slide presentations.

And I'll talk more about that as we go.

Before I launch into this, I just want to highlight that I'm really happy you are here today. PowerPoint accessibility is a huge thing, especially because PowerPoint is such a highly visual medium.

There's so much visual stuff that is happening in a presentation. Graphics and animations, images, charts, tables. Because it's such a visual medium and you're using it as a visual back drop for a talk or presentation, it becomes so much more important for you to focus on accessibility. We've gone through in these trainings a lot about Microsoft Word doc accessibility and PDF accessibility. Those two programs there's a lot of images and graphics but a lot of it is text. Whereas with a PowerPoint, I would say it's more visual than text often in some cases.

So, the impetus is on the creator of the slides to make them accessible for all people. So if you use graphics or animations it's on you as the creator to make that accessible for all users. So I'm glad we carved out an entire training on PowerPoint accessibility. It's a lot to think about.

You want to make sure the text is large. The images are as large as possible. And everything is produced in a clear way because you are going to be presenting this sometimes online and you want to think about the opportunity to be in person again one day. A lot of presentations are given in large rooms with not great lighting. So every time I am giving a presentation in person, I try to make everything as big as possible. I try to design my presentations for everyone in the back row. When I'm giving the presentation, I try to describe my images out loud as I go.

The thing I will keep going back to is simplicity is key. You all have kindly given us several examples of files. Some Microsoft Word docs and PowerPoint and PDF to look at. I have several suggestions for you for making your files more accessible. Some best practice to make them more effective for screen readers and the key thing would be to keep simplicity in mind because I've seen a lot of the PowerPoints that you gave me are beautiful and designed beautifully but not as accessible as possible. So if we can keep simplicity in mind as go through today, we should be on target.

This next slide is a checklist for you. I wanted to provide this up front because it's a table of contents of all of the topics I'm going to cover in today's training. We're going to look at layouts, slide titles, font color and design, alt text for images, creating white space, creating tables, bulleted and numbered lists, using the reading order selection pane to make sure that everything is read correctly, inserting metadata and using the accessibility checker. So we're going to go through these top 10 accessibility items.

This goes above and beyond what the accessibility checker does automatically. We'll talk about the accessibility checker last. These are the top 10 things we would do internally to make sure we checked our PowerPoint thoroughly and we're giving out an accessible version to share with people.

So, I'm going to start in with the very first one. Before ‑‑ I want to go back for a moment. I talked about how there are more than just PowerPoint out there. You can use Google slides or other different programs to put together your slides. A lot of these lessons that we're going to talk about today are true across formats. So when we're talking about color contrast, table navigation that's true across programs. But all of the screen shots in today's presentation I'm using PowerPoint.

So here we have a screen shot from Microsoft PowerPoint. We've got the layout tab open on the home ribbon. So go to the home ribbon and you'll see a drop-down menu for layout. It has many different options here. Title, a title of contents, content with captions, all sorts of different options for your layout. I usually choose a layout with the most accessible place holders as possible and then delete the ones I don't need because it's easier to do that than to start with just one accessible placeholder content box and add more because it will change your whole layout. It's tedious. So I like to create my accessible presentations basically with that two-content option in the upper‑right. That layout gives me a title placeholder and two regular text placeholders and then if I need more, I can go change my layout again. If I don't use both of them, I can delete the extra one. The thing that you do not want to do is you don't want to insert a text box on the insert tab.

The insert text box is something I was taught in the 90s. I'm of course young and beautiful and haven't witnessed the 90s era. I'm joking about my youth and beauty. In the 90s I was taught inserting a text box is a way to insert on a slide. However, it does not create accessible text that the screen reader can read.

So, we'll look at some examples. If you do insert a text box it might appear visually but not read aloud by the screen reader.

So use these layout options to ensure that your text is going to be accessible.

So, here we have a screen shot of the outline view. Normally when you open up a PowerPoint on the home ribbon, if you go to the View tab you can choose between normal which shows you the thumbnails of the slides in your presentation or you can select Outline View which I never knew before. The Outline View shows you all the text that will show up on the slides and is available to the screen reader. If your text is showing up in the Outline View, it will be read aloud. So you can see the bold items on each slide are the titles. The bulleted regular text is the text on each slide. So I usually open up my Outline View first thing when I'm looking at a PowerPoint and anywhere, I don't have any text on that slide I will make sure is something missing. If so, I'm going to take the text out of the text box and put it into an accessible placeholder using that layout tool we looked at.

If there's a blank space you could be okay because a picture or table won't show up in the Outline View. The Outline View will not display a thumbnail of a picture or draw a table in there. So that might be okay. If you click on that slide and there's text on there that's not showing up in the Outline View, this is where you can fix it. I also delete any extra blank lines because they might be read aloud as blank lines depending on the settings someone has chosen with their screen reader. So this is a way to delete extra hardline breaks where you hit enter, enter, enter. So it cleans up the way it's read aloud.

So the Outline View is helpful for QC and accessibility checking.

Some ideas to look at or consider when thinking about having a clear and clean slide design and format, you want to think about your fonts, your colors and your contrast, your backgrounds and your design issues in general. For fonts the most accessible rings true across all programs. You want to have larger font. I try for all of these slides that I created except for the screen shots ‑‑ the actual text on my slides I try to do 24 point and higher. And I also choose a sans‑serif font such as Arial or Verdana because it's clean and clear to read for someone especially from a distance.

Colors and contrast, you want a high contrast ratio so it's easy to read. There are some examples that we'll look at where the color contrast is harder to read. I think there's an example of a light blue back ground with white text. I have to squint in order to read it. It's hard to decipher. So you want to make sure you're not creating eye strain for people and choose a high contrast between your text and back ground. White and black is great. Yellow on black is supposed to be the most effective. I swear I didn't just pick it because of Georgia Tech. Those are our colors. These colors reduce eye strain for people.

In terms of backgrounds I try to put my text on a solid color background. Either white or black or something very, very light or something very, very dark. I try not to use a pattern. PowerPoint has a lot of beautiful patterns to choose from. Beautiful being a relative term. I would say try to stick with simple and reduce that eye strain whenever possible.

On this slide if you look on the upper‑right hand corner we have a logo for center for inclusive design and innovation. On our slides we have a template where we've just put the logo on a clear white back ground and took a picture of that and then we use that as a background image. And we use that for every single slide. What that does is it makes the logo appear for people who are looking at the slide, but it doesn't treat it as a graphic that will be read aloud by the screen reader. So I don't have to put repetitive alt text to my graphic on every slide so someone listening to the presentation won't have to hear the logo over and over again. So we treated it as a background image. That way it's there but not taking up room or space for the person listening with a screen reader.

And then in terms of design, be very thoughtful of your reading order. You don't want to interrupt yourself with lots of graphics or images. Try to keep things as simple as possible. Another reason we want to do that is someone using a screen reader needs to tab through every single object on a slide to hear it read aloud. So if you have lots and lots of text boxes or placeholders, lots of objects, lots of images, they're going to have to hit tab every time to hear it described and that can be tedious and it can lead to confusion. It could also mess up the reading order. I have very few objects on my slides. I usually try to keep it to one placeholder of text, the title first, and one image on each slide whenever possible just to keep things very easy and streamlined for someone to make it best practice for accessibility.

With that said, the PowerPoint design features are very, very tempting but I would avoid using their automated design options. PowerPoint suddenly with an update within the past 6 months to a year ago started suggesting how I should design my slides and offered these very tempting beautifully designed graphics. It automatically put things into these cool color washes and had all these neat clip art and graphics and icons that made my content look beautiful but when I tested it, it was very inaccessible.

So, if you are going through the trouble to type in all of this text ‑‑ in this example we have a screen shot of a slide with the Outline View open on the left-hand side and you see on the Outline View the titles are showing up for every slide but none of the text content is showing up. So that means someone listening to this PowerPoint with a screen reader is going to only hear the titles read aloud. They won't have access to any of this text information on the slide. So we have step 1, do a community assessment. Then we've got a great paragraph and more steps and more information. All of that would be lost. I have a feeling it's probably because PowerPoint said, hey, do you want to choose this great easy design templet and someone was tempted into it.

So, using that Outline View helps you catch that. If you fall victim to PowerPoint tempting you into making things overly designed. So check and make sure that if you do choose to go with PowerPoint's design suggestions, use the Outline View to make sure it's not stripping out your text and making it inaccessible.

Hopefully, Microsoft will work on fixing that because I love the design options but I can't use them because my goal is to make things work with screen readers whenever possible.

So another thing you want to think about ‑‑ another step in our QC checklist for accessible PowerPoints is to make sure that you have very descriptive slide titles for every slide. In my screen shot here I have the Outline View open and you see the different titles for my slides in bold. Every slide should have a unique title. Try to make them descriptive and shy away from saying part 1, part 2, part 3. If you can make them distinctive because as people follow along, they can follow where you are in your argument and it helps someone navigating with a screen reader to hear the titles read aloud and figure out which slide, they want to jump to. If you're using Microsoft PowerPoint, they can pull up a window in JAWS and get a list of all of your titles and navigate that way. It's easier if you have descriptive titles for someone to know which slide, they want to focus on.

I also have a link here for you if you want to experiment with this. It's a great free tool from the Paciello group. The free color contrast analyser allows you to click on things very intuitively. If you want to go to their website www.Paciellogroup.org. That will help you test your slides to see if there's a high enough contrast between your text and background.

Here's examples on the right. You can see different background colors. These are muted pastels with lighter text. I would say that all of these examples ‑‑ I'm squinting to see what the text says. It says sample over and over again but the contrast is low. So you want to make sure you have a high contrast ratio between your text and your background. So you want one to be light and one to be dark for things to be read easily by people.

And then also with that said, don't rely on color alone to convey meaning. I've talked about this in some of our other trainings on document accessibility. If you have a list of terms that are important and you've color coded them in red, don't let that be the only way that someone can tell that they're the important terms. List them in a group separately or put an asterisk. If you rely on color to convey meaning someone who is color blind or someone who is blind will not be able to tell which content is color coded.

So, try to avoid color coding if you can. Find another way to convey that information.

So, with accessibility in your PowerPoint slides comes making sure all of your images are described. We talked about this with Microsoft Word and with PDF. And we had our great training on effective image description. We're going to have another training on complex image description. Here I have a simple comic strip that I chose to use today to talk briefly about image description. So the general approach that we're going to talk about today for describing images is you want to create an overview sentence that summarizes are of the important information in your image for the listener.

You want to keep your image description neutral and informative. And use proper grammar, spelling and punctuation whenever possible. And avoid any acronyms or symbols because you're not quite sure depending on the person's technology that they're using or depending on the settings that they've chosen different symbols or acronyms could be pronounced different ways. So I try to spell things out for clarity whenever possible.

In this example I have a four-panel cartoon. If I were to describe this briefly for someone, the way I would write image description for it is say ‑‑ let's think. I probably created alt text for it when I created the PowerPoint slides for our training today but I would describe this as a bird walking along a sidewalk that trips, looks behind him ‑‑ I don't know if it's a him or her ‑‑ a bird walking along a sidewalk, trips and looks behind him and says I'll burn this city down.

Obviously, that could be improved upon. Maybe break it down into the different panels. A four-panel comic. In the first, a bird is walking along a sidewalk. In the second, the bird trips and squawks. In the third he looks behind him angerly. In the fourth he says I'll burn this city down. You could add more description if possible but those are examples of brief description and a longer description of the comic.

So for PowerPoint because it's such a visual medium, you want to describe all of your graphics fully for someone who doesn't have access who would need to have image description.

And then we just have a slide of general tips and reminders for writing alt text. These are things that we have fleshed out in our other trainings and we will again revisit in our future complex alt text training but I wanted to include this in case some of you are attending this training in isolation. I wanted you to have this as a helpful guide to refer back to. When describing images, work from general to specific. That creates a helpful framework for someone. Especially if it's a long description it might get cut off. So you don't want to save the important information for the end. Always use proper grammar, spelling and punctuation. Do not include hard line breaks when describing images because the technology might think it's over and launch into the next object on the slide.

Always provide information in multiple modalities if possible. So I'm a big proponent of "more is better." Although I said simplicity is key but in terms of when I say more is better if you provide something in a visual format, creating a caption that describes it will help everyone. Not just the people listening with a screen reader. A caption will provide more information, provide focus for someone letting them know exactly what you want them to get out of that image.

Try to reduce redundancy when possible. Don't over describe an image. Using fewer words as possible will help someone not overload their working memory. And then always remember to edit your alt text thoroughly. Enlisting another person to check your work whenever possible. I want to give a public shoutout to Johan for being so helpful in giving me feedback on my PowerPoint's and alt text descriptions. Even as an expert it really is wonderful to have that extra person or two or three really helping make sure that you've caught everything because your brain ‑‑ even if you're an expert and past the last 10 years of your life working on accessibility, your brain is busy translating information. And so, when you're writing alt text especially, your brain is busy translating information from visual to text into language that a lot of spelling mistakes, grammar mistakes can crop up on you. So it helps to have someone checking your work.

In terms ‑‑ here's an example of a slide that has this beautiful background image but my suggestion would be to maybe just have this image as part of the slide and then have a text ‑‑ have the text of the slide on a clear background because especially down at the bottom the color contrast of that blue background is so close to the color of the blue text that it makes it a little bit hard to read and the patterning of the background image is beautiful but a little distracting and creates a little difficulty in reading of the text.

So, while I fully admit this is a very interesting background from a design standpoint, from an accessibility standpoint I would limit the image and create a separate image and have the text on a clear background or plain background just to reduce eye strain.

So sometimes design and accessibility are fighting against each other. A common theme you'll hear today from me.

Here's an example of a famous animation on TV. If you've ever watched those after school specials. "The more you know" and a beautiful rainbow star comet races across the TV screen. We have all seen this on TV. When you have animations in your slides or graphics that appear magically as a slide transition, that visual information can either be unavailable to someone who's blind or low vision or it can create some kind of confusion for people. And it's not the most accessible way to provide content.

So the best practice when we create accessible slides for someone taking a course for instance, we will take out the animation entirely and create a still image and take a snap shot of the animation and write alt text for what that animation conveys. The educational material ‑‑ the importance of that animation and what happens throughout the animation. We'll watch the entire animation and describe it. Kind of like describing a movie or audio description.

Another consideration would be ‑‑ again, more is better with the multiple modality. You could create a caption that describes the animation so you have a text version of what the animation contains on the slide, as well as the animation itself so you provide that information in multiple modalities.

Here's an example of an embedded video of the original 1954 classic Godzilla movie that's available on YouTube. If you embed a video in a PowerPoint presentation there's all kinds of hoops and hurdles to make it accessible. You need to have captions on that video. You need to have a transcript along with your PowerPoint. So we routinely remove videos as embedded videos in PowerPoint and do the same thing we do with an animation. We create a snippet of the video and then write alt text for that as an image. And then that reduces the amount of accessibility work you need to make that truly accessible for someone. And then we can create a link that will take the person to that video where they can watch it where the captions and the text transcript are available for them.

Another thing to consider with an animation or a video is that 9 times out of 10, if someone wants to view the PowerPoint presentation, they'll ask for it as a PDF. If you save your PowerPoint as an accessible PDF it might not have the capability if someone is printing it out or viewing it as a PDF file, they might not see the animation in PDF format. So you're losing that content when you save it or print it or give someone a physical copy. So that video will not be available and treating it as an image with alt text it would be available for someone viewing a digital version of a PDF.

For spacing and creating accessible spacing, PowerPoint has all of the same wonderful paragraph tools that are in Microsoft Word. If you go to the paragraph group on the home ribbon in PowerPoint, you will open up this dialogue box that I have a screen shot here. You can indent text and create space without having to hit enter, enter, enter or tab, tab, tab. Hitting enter repeatedly will create space but the screen reader might read it out loud as blank line, blank line, blank line or it might read the dimensions of the tab indention. So these paragraph tools are helpful. They allow you to insert space before or after a line and it won't be read aloud by the screen reader. Another thing you can do to create white space is open up your layout tools and choose a different layout with multiple accessible place holders and then have those placeholders spaced apart from one another and that's another way to create space on your slide. In order to create accessible links in your PowerPoint, it's the same kind of work around as you have in Microsoft Word.

So, when I say a contextual hyperlink ‑‑ creating a contextual link what I mean is the web address is not just the plan URL address. It doesn't have the http://in front of it. It's written in plain language. So the link will be read clearly for someone listening and someone with a screen reader won't have to listen to the complicated URL with that http in front of it.

So in order to create an accessible link, you will write the name of the link in plain language. And if possible, create a ‑‑ provide a brief description of what that person will find if they click on the link. Because if a user is clicking on a link that's going to take them to a new program, you want to give them a heads up of what to expect, what they'll find once they get there and let them choose whether or not they want to go there because it's a little complicated to leave programs and find their way back. So you write the name of the link in plain language, highlight it, right click it and you'll be able to paste in the actual URL.

I have an example at the bottom of the slide to explain it. I've written out my link ‑‑ the department of natural resources education website. I highlighted it and it's a functional blue link and if someone clicks on it will take you to the website. Then I put the actual URL in parenthesis afterward and make sure it did not turn into a clickable blue link. This will allow my link to be accessible. The actual link is blue and accessible because it's written in plain language. It also provides the URL for someone if you did print this or create a PDF and someone for some reason can't click on that link, they will have the link in parenthesis. You're providing that link for multiple audiences.

Moving on. I want to talk about accessible tables. Tables are tricky for people using screen readers. Often when someone is accessing a table, they have to enter into table mode in order to hear all of the data and different cells read aloud. I often advocate for creating a title for your table that comes before the table and a caption for the table that is read before the table.

That allows someone to get an overview of what's included in the table. You can go to the insert tab and select the number of rows and columns you need or you can paste a table from Microsoft Word on to your slide in PowerPoint. You do not need to paste a table or a picture into an accessible placeholder. You can paste it directly on to the slide. The accessible placeholders are only needed for text.

So if you want, you can create a blank slide and paste the table on to that slide.

It will offer you this table design tab that I have in the screen shot at the top of the slide here. The tables design tab will allow you to specify a header row if it hasn't automatically chosen a header row for you. It will allow you to pick a color design templet and it will allow you to create boarders around every cell in your table which I highly recommend. It helps people separate the content and makes things very clear where the cell begins and ends.

Tables should not be used merely for layout purposes. If you put content in a table, it should be in a column heading. If you want to create multiple columns with a list of words that's not an appropriate use of a table because you don't have a column heading for each of the rows. That's for design purposes. I recommend using the columns feature on the layout tab. If you have a table, it should really be a table. It should be a clear use of a table. Here on this next slide we have an example of a table that I would say is pretty accessible. There's some features that I want to point out that are accessible that make this a truly accessible table. One would be that there are no merged cells. So when you have merged cells meaning maybe two cells in the first two rows or the first two columns are merged together, it's going to change up how many columns or rows there are which can make for confusing navigation for someone tabbing through with a screen reader. So the most accessible version of a table will have the same number of cells in every column and every row and no merged cells. Another thing that makes this very accessible is there are no empty cells. So you can see in this table the very last column is called major. I wrote in "not required" instead of leaving them blank. You can also put NA or empty cell and that will help someone with a screen reader when they get to a cell and they just hear nothing. It's more accessible if you have something typed in there such as NA or not required.

Empty cells can be confusing for navigation because you could lose track of what row or column, you're in.

And then I've created boarders around every cell and chosen high contrast colors between the backgrounds and the text to make things easier for people who might have low vision and might need magnification to read the tables.

And something we talked about in the past with tables is adding brief alt text. You right click on the table and add a brief description. That's going to help someone before they enter into table mode to choose whether or not they need to listen to that table or move on to the next slide. In this example of a screen shot of a table here if this was an actual table on my slide the way I would describe it is table 10.1 is titled physical properties of the giant planets. It has 5 columns and 13 rows. The column headers are physical property, Jupiter, Saturn, Uranus, Neptune. I'm giving a brief structural alt text for someone and they can decide whether or not they need to listen to it.

So, selecting reading order for objects on the slide is very important especially if you have more objects rather than fewer. The more objects you have the more imperative it is that you go through and check your reading order as a final step in accessibility. So once you have things pretty set and finalized and you have all the content on your slide, go to the home ribbon and select a range and click on selection pane and open up a new pane to the right of the slide and it will show you all the objects on the slide and you can move them up and down to change the reading order. Elements that are listed last are read first by the screen reader. So in this screen shot my title is the very last object on my slide and that is read first by the screen reader. It's kind of backwards logically.

So if you ever want to test t the way that we test it in house is we click on the slide and we just hit the tab button and the order in which it highlights objects on the slide is how it will be read aloud by the screen reader. So hitting tab and tabbing through will show you the reading order. And you can use this selection pane to fix it if it's incorrect. Again, the more objects you have on the slide, the more things someone needs to tab through and the more opportunities you have for the reading order to be confusing for someone listening with screen reader technology or assistive technology.

So here we have an example of a very beautiful and very complicated slide that has this complex graphic on it. It has a very clear title which is great but on the right-hand side I opened up the selection pane and there are over 50 objects on the slide that have been carefully put together to make this beautiful graphic. So what I would suggest would be to take a snippet of this entire graph or infographic and then write alt text for it so you have one object on the slide other than the title. That's going to simplify things. Someone doesn't have to tab through all of these objects. A lot of objects are arrow or a circle and you don't want to add alt text to all of those. It's going to be way easier to create a snippet of the entire thing and describe it in one or two sentences for someone. You might not get all of the text in there that you want but it will be far easier for someone to process as an image than it would be as separate objects.

Another step that is unique to PowerPoint is making sure that your content boxes don't overlap with one another. In PowerPoint slides, especially with JAWS or NVDA, depending on the settings that someone has in their screen reader software when objects overlap it can start reading aloud the dimensions of the object in terms of how many pixels there are which is very technical and complex extra information. So to avoid this when you're doing your final QC of your slides, hit control A to select everything on the slide and make sure they don't overlap. This includes text boxes. In my screen shot here on the right-hand side of the slide I have an example of two overlapping objects. I have an accessible text placeholder on the right and a ‑‑ sorry, on the left and a screen shot on the right and they're overlapping one another. I would resize them so they're not touching and that will re/TKAOUZ that problem for someone. You also want to make sure that your placeholder contains all of the text. So in the bottom of my screen shot here you can see the last line of text is outside of the placeholder and the screen reader might find it necessary to tell the user that and start complaining that text is outside of the placeholder. So you want to make sure that your placeholders properly contain everything and they're not touching.

Adding descriptive metadata is one of the last steps in accessible PowerPoint creation. If you're making or sharing your slides online, adding descriptive metadata can help people find and locate your files better. I click on my file tab and click info and this works in both Microsoft Word and PowerPoint. It's the same set up. You click on file; info and you can add an author or title. You can add subjects or comments to provide more details information. When we're making accessible files, we make sure to have a title and author specified.

If you save your PowerPoint as a PDF, it will retain that metadata. You don't have to do that again for your PDF file. Same goes for almost every step along the way in accessibility with PowerPoint. So if you save your PowerPoint as a PDF, it will retain your slide titles as bookmarks, it will retain any alt text that you write for images, everything that's accessible on the slide as text will be accessible as text in your PDF.

So if you have done all of these steps to create an accessible PowerPoint from the beginning, your PDF will be accessible for people as well. So that's one great thing about PDF accessibility. And as promised I want to talk briefly about the accessibility checker. To run the accessibility checker you go to the review tab just like in Microsoft Word and hit check accessibility. It will open up an accessibility checker pane where it will list all of your errors, warnings and tips. If you have an older version of Microsoft Word or Microsoft Office, your accessibility checker might take an extra few clicks to get to and the second bullet describes how to get to it. If you have an older version it might not be on the review tab. You might have to click on File tab, click on check for issues and then from the drop-down menu you check for accessibility. That's the way to get to it in the older version of Microsoft Office. It runs a report. You can click on each error and it will take you to that slide and show you how to fix it and take you there so you can correct the error.

So, some of the files that you gave us to review and look at in order to customize this training they did pass the accessibility checker, but there were things above and beyond that accessibility checker that would make them far more accessible for people.

For instance, the PowerPoint presentations the accessibility checker might pick up on color contrast as well. It might not check for table accessibility in the same way we have gone through. It might think the reading order is correct or it may say manually check the reading order. I wanted just to tell you about the accessibility checker and it's great to use as a tool, but if you get a clear accessibility check, I don't want you to rely on that and think, oh, great, my hands are clear. My to‑do list is checked off. I would go through that 10-step accessibility checklist that I gave you at the beginning of the training today because going above and beyond will make something completely accessible.

So, with the remaining time and I definitely want to leave time for questions but I just have one example that I would like to get audience participation with if you feel up to it this afternoon. Going beyond the accessibility check and using all of the items we have gone through today in our customized checklist, what are some adjustments we could apply to this example slide to make it really accessible for a screen reader? So in the screen shot below I have a beautiful and very nicely designed PowerPoint slide. Along with the outline view open. So you can see in the Outline View it's highlighted as slide number 13 and the title of the slide is what happens at the station? So looks at this slide what are suggestions from what we talked about today? If you want to come off mute or type in the chat. Johan if you want to read those out that would be great. What are accessibility tips and tricks that we want to make this slide truly accessible? So as we wait for people to think and type, some ideas we want to.

>> Johan Rempel: We have a couple comments. Margot suggests changing the hyperlink to plain text. And Molly suggests changing to a plainer format. Rebecca suggests I would probably break down the content and create separate slides.

>> Valerie Morrison: I like that idea too.

>> Johan Rempel: And another person says include the text for the steps.

>> Valerie Morrison: Include the text for the steps. We have step 1, step 2, step 3, step 4, step 5. I want to acknowledge at the very beginning I'm not trying to call anyone out. This is a beautifully designed slide. For a visual learner this is very helpful because you've got everything incapsulated in one infographic here. I'm going to pick it apart from an accessibility standpoint. So I would say having this as an image that you have alt text description for and then making ‑‑ have slides after this that go through each step individually with larger fonts and maybe a darker font color would really be helpful so that you're providing it for the visual learner in one slide and then breaking it up more simplified, larger, bolder for the person using a screen reader or someone who needs to magnify the text.

>> Johan Rempel: Stefania wrote write the text inside text boxes and not over the image. So she's pointing out the poor contrast ratio.

>> Valerie Morrison: Right. All of these are good suggestions from first to last. So, again, beautiful slide but if I were ‑‑ as an accessibility person, if I were making this accessible, I would have serious ‑‑ I would revamp this a lot. I would either treat it as an image and then create other slides that have the text available because if you remember from the very beginning, we talked about this outline view. If you don't see text in the Outline View it won't be read aloud by the screen reader. So someone listening with assistive technology to this slide, the only information they're going to get is the title of the slide. The Outline View shows there's no text other than the slide title. It's only going to say what happens at the station.

As the other side of that coin, the title has been hidden on the slide itself. So someone hearing that presentation isn't going to know that this is what happens at the station. They're going to see this kind of step-by-step process. So I would include the slide title on the actual slide and then make the font larger so I could see all of the important steps that someone has taken such time and effort to type out. I might also change the color contrast down at the bottom. It's really hard for me to see. I'm just on my lap top today. So it's a small screen to start with and people might be seeing your PowerPoint in a recording on a tablet. It might be even smaller. So I really have to zoom in and see this as K‑12, health pathway, rural health pathway. And that light colored text on light background is hard to read. So I would make it much larger. I would make the contrast more. And someone pointed out that that link will be read aloud as https://. So it will be confusing for someone to hear. So turning that into an accessible link would be better.

So all of this information is excellent but I want to make sure we're all thinking about making that excellent content available to all users. So treating this as an image with healthy and robust alt text description is one option. Creating a caption that describes it is another option. Breaking it down into separate slides to make sure that that text shows up in the Outline View is another option. All of them are ways to make sure that you can have this design but then you're also making sure it's showing up for people using assistive technology.

All right. So, now that we have gone through some examples, I've gone through my checklist. Hopefully you can go back and use that checklist at the beginning of the 10 general tips for making accessible slide presentations. What questions do you all have that might have come in during the presentation or what lingering questions do you have about PowerPoint accessibility?

>> Johan Rempel: While we're waiting for the questions to come in. I want to thank Valerie. Georgia Tech was closed all of last week. Valerie really took a lot of time and effort to create this, especially that last slide. She's not calling anyone out. She's just using an example to get you to start thinking creatively about how this would be made accessible. So thank you to Valerie for her time and effort on this.

>> Valerie Morrison: Thank you, John. I appreciate that. It's overwhelming to think about because these graphics that we create for PowerPoint it is a highly visual medium. These graphics can seem overwhelming. How do I fix this? How do I make this better? There are multiple ways of making things accessible but also keeping the design. So taking a snippet of a complicated complex graphic and writing alt text is one way to do it. Simplifying objects is another part. Thinking about those multiple modalities. Creating a caption to describe things before hands or breaking things down into parts. There are a lot of different options available for you to make sure that you're including everyone and making things accessible for the technology.

>> Johan Rempel: Someone asked should we enter questions in chat or come off mute. Feel free to do either one. Molly says I appreciate the tips about the Outline View and the approach to writing alt text and that you can direct copy and paste tables.

>> Valerie Morrison: It makes things easier. You can right click and paste it in and keep your source formatting or just paste it in directly into PowerPoint. So you can paste it in as a regular table or if you're formatting is important to you, you can keep it from Microsoft Word.

>> Johan Rempel: Excellent. Then you have an internal resource here through Rebecca Brown. She says I want to let you know if you need help making your PowerPoint accessible, please feel free to contact me. It just moved. Rebecca.brown@Utah.edu.

We have the hyperlink in the chat as well.

>> Valerie Morrison: Excellent resources. An actual person and an actual template is all you need.

>> This is faith. I have a question. In thinking about the fact that you don't want to discredit people that do a lot of visual work for this because of course there's a segment around visual design of course. Do you usually create ‑‑ it sounds like a lot of work but do you create two PowerPoints? Because you don't know who is coming to your presentation? If you have someone using a screen reader? Do you have advice?

>> Is it okay if I answer? This is Faith's second day. For anything that gets posted to our website it has to be accessible. So that's what I do. During the presentation tell me ‑‑ I guess I would like Johan and Valerie to talk about this. If a PowerPoint is inaccessible and maybe your PowerPoint for example let's pretend it was inaccessible.

>> Valerie Morrison: It's not! I feel attacked.

>> No, no, no. I just need an example. You slapped it together. How does a screen reader handle that? So that kind of goes to Faith's question is do we use two separate PowerPoints. Before you answer, Valerie, let me say that Faith, I have stripped down PowerPoint's that people have given me that I post on our website. So if it's an incredibly complex table or image, I might just use the alt text to make a screen shot of the table and describe what's in there or remove images that are decorative and make it difficult to remediate. Could you tell me how a screen reader would handle an inaccessible screen reader?

>> Johan Rempel: Either one of us can speak about that. Valerie if you want to go.

>> Valerie Morrison: Sure. I would like you to speak about how the screen reader will work because you are in house expert on that. In terms of having an accessible and inaccessible version I would like to say that that kind of idea of separate but equal. That you need to create another phantom slide deck that goes along becomes very tricky in terms of file management if you've got two versions of everything. It also becomes very problematic down the road when we want to update it or want to pull information from an old PowerPoint to create a new one or an old Microsoft Word doc or you updated a form. If you have one accessible version from the beginning, the next version or any updates you make are going to be accessible.

So having that ‑‑ it's best practice to start and end with accessibility and not have multiple versions if possible.

>> Just to be clear and I put a comment in chat that situation often happens when we have a guest speaker from outside the network and they hand us their PowerPoint and it's generally not accessible.

>> Valerie Morrison: That is a lot of work. I commend you for that.

>> Johan Rempel: Both Valerie and I have been in that situation many times where people reach out last minute saying can you make this accessible. Some of our partners too send me inaccessible PowerPoints. That's why I hold off in sending that out. I say give us 3 to 5 days to provide the transcripts, the recorded archive and the accessible PowerPoint. And then Valerie brings up a good point. When you start separating it you have to update two different files. Valerie said it perfectly. Once you create an accessible PowerPoint it's easy to repurpose that and make changes and then just update it as needed. To be dropped an inaccessible PowerPoint of 40, 60, 80 slides in your lap and have it ready accessible the next day is not reasonable. So building in reasonable expectations. If you have a presenter that you know will not provide an accessible PowerPoint, ask them to provide it a week and a half to two weeks in advance so you have an opportunity to remediate that. This is a challenge. Unfortunately accessibility is an add on in people's minds. Oh, I just created this beautiful PowerPoint slide and now I need to make it accessible. Accessibility should be baked in from the beginning. As far as accessing it with a screen reader, think of if your screen reader is turned on and you close your eyes how accessible is that? That's what a blind person would experience. If you don't have the alt text, if you don't have things in correct tab order, if you don't have proper headings which are transferred over to bookmarks there's no rhyme or reason to the PowerPoint. So it really is ineffective. We're not here to criticize. There's no perfect in this. People will always forget to create alt text. It's a good faith effort. I think people with disabilities even if they see an effort into it at all will be grateful for that.

>> I guess I'm not 100% clear. We have Zoom. There's a PowerPoint showing. According to Valerie that's an accessible PowerPoint but is it accessible to someone who uses a screen reader via Zoom? Does that make sense?

>> Johan Rempel: No. It makes perfect sense. The answer is no because a screen reader can't access what Valerie is displaying. That's why when you present ‑‑ this is a whole different presentation. You want to provide a level of audio description to what you're presenting where someone who can't see the PowerPoint isn't going to miss essential information. And it's one of the reasons why we make sure it's accessible that when I share this with Allie McDougall. When she sends that out you can be assure this will be 100% accessible. And that if anybody needs to review it whether it's someone blind or sighted this entire presentation is going to be readily available to them.