# Webinar: The Art and Science of Describing Images

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Full details about this webinar, including related resources can be found at:

<https://daisy.org/news-events/articles/art-science-describing-images-w/>

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>> Hello everyone, and a very warm   
welcome to you. My name is Richard Orme from the DAISY Consortium and I am your host for today’s webinar, “The Art and Science of Describing Images”.  
OK, let’s get started!  
Whether we are creating accessible Word, HTML, EPUB or PDF documents, or posting to   
social media, we need to know about describing images.   
It’s a skill applicable across many job functions and disciplines, and there’s always more to learn.  
In our webinar a month ago, “Describing Images in Publications”, we had an overview of basic principles; a look at tools, tips and training; we heard how some publishers are managing image descriptions as part of their workflow; and we learned about the future potential of artificial intelligence to automate image description. If you missed it, then the video, transcript and slide deck is available on our website.  
In this session we get intro practical specifics.   
You will learn four golden editing tips to help you craft effective descriptions.   
Then we will walkthrough describing examples of popular image types, from Shakespeare to   
pancakes, via Freddy Mercury.  
Then after the presentations we’ll pick up any questions we haven’t got to. But at this   
point, I’ll hand over to our panelists to introduce themselves.

>> Valerie Morrison: Hi, my name is Valerie Morrison and I work at CIDI, Center for Inclusive Design and Innovation at Georgia Tech in Atlanta Georgia.

>> Huw Alexander: I'm Huw Alexander and I am the director at textBOX. We work with publishers and we are the home of aspire. I'm glad to be here and hello to all of you.

>> Valerie Morrison: I'm glad to be here too and I want to give everyone a brief overview about what we are going to be covering today. So I'm going to start with some editing tips for after you have written your wonderful image description, how to go back and use different lenses to craft your alt text and edit it so it's efficient and well‑honed. Then I'll hand over to Huw. He has great exciting images that I'm looking forward to hearing him talk about.

So, I am the e‑text manager at CIDI. And have been working there for about 8 or 9 years now. And we make accessible versions of course material for higher education students. We also serve a wider population than that but our core customers, the people we serve are students that have various print related disabilities. So myself and all of the people on my great team are very experienced in writing a high volume of alt text and we have had to really develop skills to figure out how to edit the alt text as well. So that's what I'm going to be focusing on today.

Before I started working at CIDI, I was an English instructor of literature and composition at UGA for 10 years. So hopefully I can remember some of my old grammar and editing skills so I can try to pass that along to you all today.

So just before we even start, we wanted to give an overview. Richard mentioned we had a previous webinar on describing images in publications and we covered the basic approach to image description. So in case you haven't had a chance to view that webinar, I wanted to go over the basics of some of the material that I covered on how I approach writing image description.

So, I always try to begin with one general informative sentence. That gives people a framework for the basic idea in the image or the content and then you can start general and fill in the details as needed.

That helps someone listening get a general idea and then fill in the specifics.

You always want to use proper grammar, spelling and punctuation in your alt text description. It will be read correctly by screen reader software. There are different types of screen readers out there. So you want to be able to make sure that you are spelling out acronyms or symbols whenever possible so that no matter what screen reader software, you know it will be pronounced correctly. Some screen readers when they get to a capital U and capital S will read that as United States. Some will yell us at the person listening. Others may just say U. S. So if you want to indicate the United States, the best way to do that is to spell it out.

You want to avoid hard line breaks because screen readers might pause or end reading your alt text description. So if you are writing an alt text description, don't insert hard line break by pressing enter and then going to a new paragraph.

Put everything in one paragraph.

And hopefully you are not getting to the paragraph stage ‑‑ a lot of the tips I'm giving today are about trying to edit things down to a few sentences in our alt text description.

And then finally, considering providing information in multiple modalities. That could include if you have a long alt text description, taking some of that out of the alt text and providing that as a caption instead or taking lots and lots of data from a chart and creating a table alongside it. If you have an infographic that has a lot of data, pull that data out and create a table and then your image description doesn't have to have all the data in the alt text. That's a lot to cover. If you are interested in getting more information on any of that, please go ahead and go to daisy.org/webinars and you can find all of their wonderful helpful resources and webinars that they have recorded, including the one we did last month on describing images in publications.

So, I want to talk a little bit about the art of editing. It's really an art form. I have an icon here of a pencil, old school editing symbol. Whenever possible, try to have multiple people reviewing your alt text to ensure clarity and catch errors. I consider myself a very careful writer and I used to teach grammar every day to young students who could not care less about it which only made me more passionate about it. I make errors when I write alt text. I'm horrified when I go back and look at my own writing when I'm writing image description and it's because my brain is so busy trying to translate that visual information into language that whatever cognitive process that's trying to edit while I write goes out the window. It's gone. So try to get someone else to review your alt text if possible. If it's just you, I would argue what I would tell my writing students. Give yourself time. Write one day and come back to edit it the next day is the best. If you can't have organized my own editing lenses into four different categories. These are four different tips that can help you refine and hone and craft your alt text to make it more effective.

So editing tip number 1. Here I have a crystal icon to represent providing clarity.

So you want to use specific precise language whenever possible. Simplify your word choice and avoid lots of jargon. Simplify and describe in plain language if possible. Writing out any acronyms or symbols so it's clear and pronounced correctly for the listener. And then using proper grammar and punctuation. Sometimes I see alt text that's very descriptive and information filled but it kind of is not effective because there's no punctuation. It's all one long laundry list or a run on sentence with dashes and someone listening to that information really needs the information to stop at certain points. You need that pause that a comma or a period would provide.

So, editing to provide clarity would be looking at your language, making sure it's clear, concise and writing everything out clearly.

So, second editing tip would be organizing your information in clear and predictable ways. I have a filing cabinet here to represent what I wish the interior of my mind looked like on the regular. But you want to organize things in predictable ways for the person listening so they can get in the rhythm of your image description. They have to do less work because they understand how you are approaching the description of images. So working from general to specific is always key. And then beyond that, using parallel sentence construction to describe things. So if you have a bar graph with many bars of information, you want to describe those bars in the same sentence construction each time. Not reinvent the wheel as you go to confuse the listener. You want them to have the mental image of what you are describing in clear, consistent ways.

Grouping like items and organizing information in predictable ways is key and very helpful. And then describing images by their similarities first and their differences second.

So, if I were to use a very simple example of a barn yard filled with animals and farming equipment. It's an image of a very busy farm. I would want to maybe not just list everything. And there's a chicken and a cow and a tractor and a man and a lady and a cat and a cow and a horse and another horse and a fence. Grouping those items in logical ways, right? Working from general to specific.

So, providing an overview first. A painting of a farm with many animals and farm equipment would my first sentence. And then maybe if you need to ‑‑ if it's relevant, count how many different animals. 10 horses, 2 cows, 4 chickens and a dog. If it's not necessary, say a variety of farm animals. So grouping your images in easy digestible ways.

Editing tip number 3 is trying to remain neutral whenever possible. So after you have written your alt text description, step back and think sometimes less is more and knowing what not to say is important too.

So don't try to instruct in your alt text. Every once in a while I'll be asked to describe an image that I have to reverse Google search and I get led down the Wikipedia rabbit hole and I want to copy and paste that because I found a really cool information about a Native American beading process. Not all of that is relevant. So just describe what is contained in the image and stop yourself there. Try not to soap operaize your alt text. Try not to invent thoughts and feelings behind people's expressions. You can say someone looks sad or angry. You can describe what their face is doing but try not to interpret or play arm chair psychologist and figure out ‑‑ interpret what they are feeling.

And then removing references to gender, age, sex, race, or ethnicity if they are not relevant to the content or the context. If I were describing a workplace environment with several coworkers sitting around a table together, I would probably just leave it at that. Several coworkers. Not gender specific or age specific. But if I were describing an image in a chapter on sexual harassment or workplace ethics, the age or the gender or race might become relevant. And so really making those decisions based on context but remaining neutral whenever possible. My icon here is a neutral smiley face. He see not smiling. He's not frowning. He see just there.

And then my fourth tip is reduce redundancy. If you are repeating information in the caption or paragraph proceeding, try to edit that down so it's less wordy. Cutting unnecessary phrases such as "a photo of." Try to cut down on those if possible. Avoid repeating the caption and describe the meaning of symbols and how they function, not what they look like.

So for example, if you are describing a map and there are all kinds of symbols on the map, don't get caught up in the color or appearance of the symbols. Try to focus on what the symbols represent.

All of these editing tips, keep in mind, you want to be reducing the length of alt text if possible. The best practice for alt text length is 125 characters or around the length of a tweet. I have the twitter logo here as my inspiration. The JAWS screen reading software is one of the most popular screen readers out there. It processes alt text in 125 character chunks. It pauses ‑‑ the default setting for JAWS will pause reading after it reaches 250 characters. It will prompt the listener to press other buttons or keys or other options in order to continue reading.

People can set their default settings ‑‑ they can change their default settings to make the reading more verbose so they hear all of the alt text but if you have long alt text, I recommend you provide it as a caption instead. You are having the alt text work too hard. It can backfire on you and put a strain on someone's cognitive load.

So this is my last slide and I'll be handing things over to my next presenter in a moment. But I wanted to pause a really emphasize that you want to remember that often less is more. The average person can remember about 7 items or words at a time, plus or minus 2. So let's look at this in a pessimistic way and just hedge our bets and say that a person can remember maybe 5 items at a time reliably. My image is a person with lots of gears and cogs and wheels in their brain represented how hard someone has to work. Just living in today's world we are feeling a lot of this work. When you are listening to alt text, you are doing a lot of extra work that someone who is reading the text who might be sighted might not have to do as much mental work to get that information or content. So introducing fewer words and sentences helps the listener process information more efficiently. There's a lot less gear turning in their head if the alt text description is shorter and more efficient. Really when you simplify things and edit them down for clarity, you are helping someone get that content and move it from their working memory into their long‑term memory which is the goal and reducing the possibility for auditory fatigue. So I'm going to go ahead and hand things over to Huw.

>> Huw Alexander: Excellent. Thank you so much Valerie. Can you see my screen okay?

>> Valerie Morrison: Yes.

>> Huw Alexander: Perfect. Before I start, I was thinking those are great points and your point about reviewing and having your alt text reviewed by someone else is fantastic. I'm thinking if you don't have someone else, one of the options that I tend to do is if you copy and paste your alt text and put it in a Word document and have it read aloud to you it's a great way to pick up errors and pauses and everything like that. So that could be an option for you if you don't have someone close on hand to read your alt text.

Anyway, as I said, I'm Huw Alexander. I'm from textBOX. I'm going to talk about the popular images we work on. We do a lot of academic text books. There's 7 in total that we will walk through.

I'm going to talk about the focus locus method that we developed. I found alt text quite daunting. Where to begin with complex images. So we developed this focus locus method. So you move from the general to the more specific. So you have the main subject and then you move through and develop a path way through the image and add details. So the locus elements are the details. The focus is where you start. So we like to talk about this in terms of scene setting and story‑telling. You create an overview which generally the alt text. And in longer descriptions you are building up the structure of the image so someone can visualize it. Here's what's in the image and it's a brief overview and then talking about the structure, I will show you examples in a short while.

So you set up the scene and then describe it. So going from the general to the specific and creating a path way through the image.

So the image types we are going to talk about are bar charts, pie charts, line charts, Venn diagrams, flower charts, scatter lot and photographs. We have details for others but that will be a later part of this series. So we are going to concentrate on the 7 most popular ones for now.

So, bar charts. A description of a bar chart needs to reference the following data elements. The title of the chart is generally the first sentence in the description. And always thinking about in terms of the structure and think about the direction. This is something that gets forgotten with bar charts. They can be horizontal or vertical. So to aid the visualization process, let them know if it's vertical or horizontal bar chart. Then talk about the structure of the chart. The Y‑axis and the X‑axis and the measurement values and the variables being measured. You talk about each data point and when you describe the data, work from left to right. If it's a horizontal one it depends. You can go from bottom to top but let the user know.

So for example, this slide is called charting Hollywood. This is top 10 box office films of 2019.

Each of the descriptions here the first sentence basically is highlighted in red just to show that's the alt text for each ‑‑ when you put it into your EPUB. It will say a vertical bar chart illustrates the top 10 films at the world wide box office in 2019. So the reader will decide if it's of interest to them. The long description goes on. The box office take in millions of U.S. dollars is plotted on the Y‑axis with a range of 0 to 3 million dollars and 10 films are plotted on the X‑axis. So you provided the structure of the bar chart. So your user will know the measurement. The top will be 3 billion dollars and they know there's 10 films.

So having that is important there. If you said the films are plotted, you wouldn't know how many films are going to be on the chart. It could be 27 films but providing as much information up front so they aren't surprised.

>> Richard: You have used the terms alt text and long description. Are you saying that that first sentence, the vertical bar chart illustrates, that is the alt text and the remainder is the long description?

>> Huw Alexander: Yes. The alt text is code under to the EPUB file. The long description allows you to provide more detail. If you ‑‑ it's difficult to provide all this information in an alt text. You have a limited amount of space in terms of characters and limited amount of ability to use things like lists. You can't use a list in an alt text. So in order to provide the full detail of the description, you need to have a long description which is connected to that image and there's various ways of doing that. I believe there's a webinar from daisy coming up on how to introduce long descriptions in EPUB files. Does that help?

>> Richard: Yes. So the technique will vary on the format.

>> Huw Alexander: Basically the concept with long description is you are linking out to another page within the book that holds the description and you can link back to the actual image and place in the text.

So here's the data points. I'm not going to go through them all. Avenger’s end game is the number 1 film last year with a worldwide gross of 2 billion... [Reading from PowerPoint]. It's broken down into U.S. domestic and international.

So what you are doing ‑‑ if you think about a bar chart ‑‑ it's the same with a lot of these charts, you think about where they came from. They generally came from a spread sheet perhaps. In their original form they were a list. So you are basically taking it back to their original form and using a list. A list is really your friend in terms of providing descriptions. It's very good to have an organized approach. Having the listed out like this creates structure. People know that number 4 is spider man and number 5 is captain marvel then they don't get lost in the process. So that's for bar charts. So you think about where the source data and you re‑create that approach.

The pie charts. Pie charts need reference the following data elements. The title is part of the general overview. You talk about the structure and design of the chart. What kind of pie chart is it? It is an exploded pie chart, a 3 dimensional pie chart? It's useful to provide this information so people can visualize it again.

We talk about the number of variables. They may be a value, a percentage or both. When describing data, organize the data into size order. This helps the user to visualize the chart. If it's in size order, it doesn't have any surprises. You don't get to the last variable and it is 27%. It helps understanding basically.

If there's color in the pie chart, if it's integral then include it. Otherwise, it's not that necessary. It's basically being used to look pretty. So you don't necessarily need color in the description.

For example, this is a pie chart of Shakespearian death counts which is useful information for anyone I imagine.

The pie chart is listing out all the different ways that people die in Shakespeare plays. The most popular ‑‑ if that's the right word ‑‑ method of death is being stabbed. And then stabbed and poisoned. It's a fun world in Shakespeare. I think most of these happen in Titus. It's not a great time to be around.

>> Richard: Common, rather than popular.

>> Huw Alexander: Yes, popular death ways. This slide is called exit pursued by bear. There's a small bear in the right corner. This alt text is a pie chart illustrates the various causes of death in Shakespeare's plays. And then you provide the user with the longer details. 22 causes of death are listed in the chart. There are 62 deaths in total. They are listed here in order of frequency together with the percentage of total. So there's a numbered list. Stabbed is 48% of the total. 30 people stabbed to death in Shakespeare's plays. And then beheaded and poisoned and stabbed and then baked into a pie at 6. Throws ones several away is 1% of all the deaths in Shakespeare. I'm not sure what that means. You get the idea. And then the final one is 1% again which is disappears. So we shall disappear from this slide.

Line charts are very straight forward. Coming from a spread sheet. You need the title of the chart, the structure and the Y‑axis and with the measurement and value and range and X‑axis details.

This slide is toy story. We have a line chart which illustrates the gross sales of Mattel by region. This is measured in U.S. dollars. So the alt text is a line chart described the gross sales of Mattel by region between 2009 and 2017. Is this interesting for the reader? Yes, so we will keep reading... [Reading from PowerPoint].

This is quite useful if there are missing data points to point it out so people think have they forgotten to add that? So if there's missing ones, make a note of that. Then we create a list from 2009 to 2017 and each have North America, Europe, Latin America, Asia and other. So a list is your friend in this process. So it's a great way to organize the data into something that's easily consumable by the reader. The next is scatter plots. These are more challenging. These need to reference the title of the chart, the structure of the chart with the X and Y measurement values and range. The data points for each variable. When describing data work from left to right across the scatter plot chart. If the chart contains mass data, then a trend analysis may be used to provide the user with an overview. If a trend line is included, this should also be described.

The thing with scatter plot charts I've seen one recently that have 500 points on them. You don't want to list out 500 points. It's going to be the most boring thing on earth for the person reading it. If you think about scatter plots, as a sighted person you are looking for trends. You are not looking for the exact values. You are looking at a scatter plot and hoping to get an idea within a few seconds. So if there are 500 points, don't list them all. I think it's a waste of everyone's time.

This slide is a coffee break. This is coffee verses max daily temperature. Coffee is on the Y‑axis and temperature on the X‑axis. The title for this one is a scatter plot chart explores the relationship between coffee sales and daily temperature.... [Reading from PowerPoint].

So you are creating structure so people are aware of what they should be thinking about in terms of what's being provided in the chart itself. There are 49 values plotted on the graph. Always provide the number of values. That's a lot. So we don't want to list out 49 values. So we provide a trend analysis. A larger number of coffees are sold... [Reading from PowerPoint].

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So you provide the overview so people can get the gist and the idea of what that scatter plot is trying to tell you.

The next one is photographs. Photographs tend to be describable in just alt text. Unless they are terribly complicated. The main subject of the photograph, the action, any emotions visible, whether people are laughing or smiling or sad or whatever it may be, the location and conditions if they are applicable like weather or whether they are in a town or countryside scene and if the photographer is not provided as part of the caption, it's useful to include that especially if it's a well‑known photographer.

Here's an example. Give peace a chance. This includes famous people in bed in a Hilton hotel in Amsterdam in 1969. This is a famous picture of John Lennon and Yoko Ono. The alt text would read John Lennon and Yoko Ono sit up in bed during their 1969 honeymoon peace protest in the presidential suite of the Amsterdam Hilton hotel. That is probably all the information you need. We start with them and then move through the other details about the presidential suite and the hill ton and them sitting up in bed. You could rewrite this if you were the Hilton hotel and say you see a scene with a bed in it, two people in the bed, there's floor to ceiling windows behind. There's nothing wrong with that but that's not telling you what they are really doing. If you are doing a history of art photography course and you need longer description, you could go into longer detail. Lennon and Ono are smiling and wearing pajamas... [Reading from PowerPoint].

So you are going from the initial focus the John Lennon and Yoko Ono and you move in a pathway through the description and providing all the details, the guitar, the tape recorder, the flowers

Flow charts, you need the title, the structure of the chart, number of tiers and layers. In decision trees you need to reference shapes and what they represent. Diamonds represent decisions. Let's go through an example. This slide is what Freddie wants.

A flow chart represents what Freddie Mercury wants through his lyrics. A flow chart illustrates what Freddie Mercury wants through his lyrics... [Reading from PowerPoint].

. You end up with 6 pathways that flow through the flow charts. And these are as follows. 1, Freddie Mercury wants to break free. Two, he wants to ride his bicycle. 3, he wants it and wants it... [Reading from PowerPoint].

So you are creating a structural pathway through the description.

And Venn diagram consist of list of elements interacting with each other. You need to state the number of variables and labels and identify the focus point and the path way left to right or generally clock wise depending through the 3 circle Venn diagrams and the labels that you move through.

This slide is a Venn diagram with three intersector circles labeled in a clock wise direction of eggs, milk, flour... [Reading from PowerPoint].

. You are using the list to create structure.

Finally and I think we are going to be talking about this more in our next session we talk about sector. This is something to talk about when you have complex images. This is an illustration from star dust beautifully illustrating a graphic novel. If you have got something this detailed, it's really useful to divide the image up and talk about it in north, east, south, west. Or you can talk about it in a clock section. So it's a way of dealing with really complex images and paintings. I think we will cover more about that in the next session.

I think we are good for time. We will be having a Q&A session.

>> Richard: We have quite a few questions and not too much time. Something several people would welcome clarification on is this distinction between alt text, the picture caption and the long description. Could you help us out, both of you, on where information goes and how to make the distinctions?

>> Valerie Morrison: I've been sitting here looking at the questions coming in. So I've had a minute to think about them if I could field this one first and we could get Huw's perspective after. If we could go back to the slide that had John Lennon and Yoko Ono I think that provides a great example and if you could go to the next one. I think this is a perfect example that Huw put together of had difference between alt text and a caption. So in the red description that he has at the top for the alt text he see written one or two sentences that provide an overview and general description of the content. I would call this brief alt text. So his brief alt text is John Lennon and Yoko Ono sit up in bed during their 1969 honeymoon... [Reading from PowerPoint]. The longer description below about the flowers, how their hair, what they are wearing to set the scene and mood and give more cultural context I think that could be move under to long description or if you have the ability to put it in a caption. So it really depends on whether you are able to manipulate the content yourself or if you are remediating something. In my experience, I'm always remediating. I'm not the publisher. I'm working to make something accessible after the fact. And so, I don't have the option of moving this information into a caption. The caption is available for everyone. Any individual is going to be able to read that and really get some more back ground and then you are saving just the visual details for your alt text description. So that's what ‑‑ how I would break things up. The alt text should be the visual description and provide a quick overview. And then a caption or long description should go into further detail, provide cultural context and go into as much depth as you are interested in providing.

>> Richard: Huw, do you want to add to that?

>> Huw Alexander: One thing worth bearing in mind for publishers in particular if you are providing images, a good caption underneath the image can be very useful in terms of ‑‑ I see a lot of images that don't have any kind of title of what that image is. If you have title captions for your images, then you often won't need the alt text because you already provided the information. So that will save you time and cost.

>> Richard: So what I heard was that the picture caption is available to everyone who is using assistive technology or not. That provides context and a title for that picture. The alt text is short alt text that's available only to someone using assistive technology and the long extended description is where you need to expand when your alt text is not sufficient to describe or bring out the data perhaps that's in the image. Is that a fair summary of what you said?

>> Huw Alexander: Absolutely.

>> Valerie Morrison: Yes.

>> Richard: Sue had the question which was on the same topic. Alt text we get that. That's required. If the image is not described in the surrounding text, that has to be included. Are extended descriptions required or optional?

>> Huw Alexander: It depends on the context of the image. If you are providing information ‑‑ especially now that text books are so visual compared to a decade ago. There's so much pedagogy in images. It's being insensitive to the visually impaired user because they are missing out on the information. So think about your user. Is that information being conveyed within text or is it additional information? We have a useful flow chart that I can go through in the next session about making decisions like a decision tree about how to decide on whether a description is needed or the alt text is sufficient or do you need a longer description or nothing at all. So it has to do with context. You can have a same image in a science book and a geography book and it will vary. It's very much a case by case basis. I wish there was an easier answer but you have to analyze each image as it comes along. Every image doesn't need a long description but some complex ones benefit from it and the user ‑‑ helps the user with understanding. So if you can and the information isn't conveyed else where it should be put into a long description.

>> Richard: You are driving the deck still. Can you go back to Valerie's tip number 1? Could you please clarify the alt text length? 125 characters was given as a limit at one point but then we went to talk about JAWS cutting off at 250.

>> Valerie Morrison: So 125 is my goal. It's not an actual limit. 250 characters is where JAWS cuts off and pauses and then you have to press a key to continue. So I would say 250 characters is the default limit for alt text with that specific JAWS screen reader. But my goal is to try to think of alt text as being 125 characters. Somewhere around the length of one of the original tweets. I'm trying to keep that figure in mind but of course I always have to exceed that because it seems in an educational context you do need to provide above and beyond and go further than 125 characters. But the 125 is my goal. 250 is the cut off.

>> Richard: Perfect. Huw, back to tip number 1 again. I have a question on the extended description. Huw, in many of your examples you were giving information data in some of those graphs in description. I've seen those presented as tables, navigable tables. Did you want to comment on that?

>> Huw Alexander: It really is down to your preference. Some publishers like it to be part of the description. Others prefer a table. It really is up to the individual publisher. Both are valid. I like the table approach. That's something I will address in the next session. It provides a lot more independence for the user. They can jump around in the table as long as it's an accessible table using the screen reader. So the table especially if there's a huge amount of data can be really useful.

One of the things though that I've really noticed working with publishers is you will have the graph and sometimes it isn't clear. You might have 50 data points on there and you are trying to look at the book and see the data. If publishers provided a table of data with each graph that they include, it would be so useful for everyone to get more accuracy and see exactly the data points. So not just for assistive technology users but for everyone to have access to data tables. So it's down to the publisher and the preference they want. You can write it in long hand list form or you can use a table. As I say, we will go into more details about accessible tables in the next session.

>> Richard: I try today do justice to the long list of questions that have come in. This has all been about image description and sometimes 250 just isn't enough. So we have talked about extended and long descriptions. There's some questions about how are those included and how do you include that information and present it within the different formats. We will be visiting that topic again probably in September. So watch out for that. I'm sorry we weren't able to cram it into this session.  
OK, we’re coming to the end of this session. Thank you to Valerie and Huw for sharing great information and insights.  
We have one more webinar for you before we take a break for August:  
Next week your host will be Dara from AHEAD Ireland, for the session “WordToEPUB Extended Tutorial – Accessible EPUB in Seconds”. In this practical session I will be joined by   
Joseph from Berkeley, California and Nancy from Vancouver, Canada. We will demonstrate how to get started creating accessible EPUBs from your Word documents using the simple one click solution. We will then explain advanced features, including custom styling, page   
numbering, multiple language support, how to include math, customize metadata and much   
more. You can register at daisy.org/webinars, where you can also sign up to the webinar announcement mailing list. Then in August we give you all a well-earned break, but we already have some exciting webinars ready for our return in September.  
If you would like to suggest a subject, or if you are considering presenting a webinar, then please email us at webinars@daisy.org I hope you will join us again next week. In the meantime, thank you for your time and have a wonderful rest of your day. Goodbye!