ELISA LEWIS: Hi, everyone. Welcome We're going to wait a few minutes just to let audience members join the session, and then we will get started. While we're waiting for attendees, could I get a Raise Hand, a show of hands, if you can hear my audio clearly? Awesome. Thank you, everyone.

Great. So welcome to those of you who are just joining us. Thank you, everyone, for joining this session. We're really excited to be with you for Global Accessibility Awareness Day, or GAAD for short. This session is called, "Lessons Learned, Canada's Past, Present, and Future in Digital Accessibility."

My name is Elisa Lewis, and I'm a senior brand marketing manager at 3Play Media. I'm a white woman with dark brown hair pulled back, and I'm wearing a maroon sweater.

This presentation is being live captioned. You can view those captions by clicking the CC icon in your Control Panel. We also have an American Sign Language interpreter with us today, Jared. And Jared is spot-lit on the screen.

This session is being recorded and we will share the session via email in the next day or so. Please do feel free to ask questions throughout this session. You can use the Q&A window for any content-related questions for David, or the chat box for any logistical questions throughout the session.

I want to welcome David Berman. David helps organizations get great things done through the motivation and techniques he provides for applying strategy, design, ethics, and creative branding and communications to business problems.

David has over 30 years of experience in inclusive design and strategic communications. As an internationally acclaimed expert speaker, communication strategist, graphic designer, typographer, and ethics chair, his thought-provoking keynotes and workshops have brought him to over 50 countries.

David is one of perhaps a few hundred people globally to hold CPACC certification, the world's only certification for accessibility professionals. In 2019, David and his team were hired by both the government of Canada, by a coalition of Canada's top accessibility organizations, to advise on the content of the Accessible Canada Act, as well as to provide advice on policies that will inform regulations to come.

We're so glad to have you with us today, David, on Global Accessibility Awareness Day. And with that, I will pass it off to you for a wonderful session.

DAVID BERMAN: Thank you so much, Elisa.

I'd like you to consider, before we begin, that this online event is for me taking place on the traditional unceded land of the Anishinaabe Algonquin Nation. And I'd like us all to take a moment to acknowledge the situation wherever you happen to be.

I'd like you to imagine that you're in Halifax, Nova Scotia. It's 1917. The First World War is raging. And perhaps a quarter of the population of your city of 50,000 people are busily doing things to help get North American supplies to Europe.

There's two ships in the harbor, two enormous ships. And they seem to be on a collision course to hit each other. They're moving so slowly that you have lots of time to call your friends and watch.

Unfortunately, one of these two ships was a French ship called the*Mont Blanc,* which was carrying 2,600 tons of explosives bound for France. And when the ships collided, people were watching this, and the explosion was the largest explosion, human-made, in the history of humanity to that date. It leveled the city. Out of 50,000 people, 2,000 died, 9,000 were injured, and hundreds of people suffered vision loss because they saw the explosion.

Now, using an invention created in Ontario by an Alexander Graham Bell 20 years earlier, Halifax was able to call Boston. And the mayor of Boston within 12 hours had over 100 doctors and nurses on a train to come help out in Halifax. So thank you, Boston.

However, the silver lining of the Halifax explosion was the creation of the CNIB, the Canadian National Institute for the Blind, similar to the NFB in America. And the CNIB has a history since then, 100 years of, as so often I'll be showing today, cases where Canadians are punching above their weight class on the international stage when it comes to accessibility.

So just for example, I'm showing a picture now of Canada's Roland Galarneau, a legally blind scientist in Gatineau, Quebec, who invented computerized Braille printing for the world and holds the patent for it.

Or CNIB working to make-- we have these dynamic Braille displays, like the one I'm showing right now. I'm showing one that would retail for about $3,500. But the challenge has been, how do you get to the place where the dynamic Braille display is economically accessible for everyone? And so the CNIB led the goal of getting a $600 or less dynamic Braille display, affordable, called the Orbit. And with subsidies, it means that people, perhaps, who need one can get one for perhaps $400, $500.

They've also led in the development of Unified English Braille, which is used in English countries throughout the world.

Another feature the CNIB led on that I want to show you is tactile money. I'm showing a $5, a $20, a $50, a $100 Canadian bill. And now for over a decade, on our money there's this tactile embossement which can be seen, in this case just next to the Queen's head.

And so I'm rubbing my fingers along. And now, it's not Braille. Rather, it's cleverly designed by clever Canadians so that, let's say, you're in a bar, someone can't mess with it and give you the wrong change. So the more tactile dots you take away, the less the money's worth. [LAUGHS] And so therefore-- and I'm showing the chart on the screen of how the array of the 5, the 10, the 20, the 50, the 100 is used.

So the idea of the tactile money is all the bills can be the same size. And that works with other digital equipment. But we can recognize which currency we have simply by detecting the tactile features. And this Canadian invention has now been picked up in over half a dozen countries. In fact, coming to America, 2026, the $10 bill is going to have a similar tactile feature as well as other features.

So now, you can't be truly digitally accessible without digital images. We use digital images in so many ways. And they can be manipulated by AI, by whatever. And indeed, the world's first true digital camera was developed at the University of Calgary here in Canada.

And it is kind of fun that I'm showing the picture that's at the resolution of those first-- the first CCD-- the CCD, which is the core of the invention-- was such that its resolution was 100 pixels, eight by eight, black and white. And so this was the resolution we had in 1981. But of course, now we're all carrying in our pockets the world's best cameras, almost.

So fast forward 20 years and we have inventions like eSight. And eSight is a product that is developed here in Ottawa, marketed out of Toronto.

And I'm showing a picture of a young woman who's wearing a pair of goggles. And what happens on these goggles is, strapped to her waist is basically two computers that are in a real-time changing what comes in on the visible field so-- it's so quick that it still matches what she's hearing in her ears.

And so for example, if someone has a macular degeneration, which changes how their eyes work for them, then they can walk through a mall, or be in front of a website, and have a personalized normalized experience. And again, the cost is going down and down.

Now, on another front, going back to World Wars-- and I realize we're talking about digital accessibility today. And I want to show how analog accessibility has brought us more digital accessibility.

So I'm showing a picture now from 1948. It's a picture of the world's first wheelchair-accessible bus that was developed and rolled out by the Toronto Transit Commission. That's the city's bus company. And it's showing the ability for a wheelchair ramp to come out of the bus, as well as the interior of the bus was designed for accommodating many wheelchairs.

Now, why 1948? Well, after World War II, unfortunately, a lot of mostly men came back to Canada, and to America and other countries, with substantial mobility challenges, as well as invisible challenges. And so many of the accommodations, whether it's the curb cuts that were developed at the University of Illinois or this type of technology here, we see this accommodation.

And so 1953, I'm showing a picture now of the gentlemen at the National Research Council of Canada, George Klein, invented the first electric wheelchair at the Montreal Road campus, which is significant to me because I grew up a mile from the Montreal Road campus. In fact, 1953 is the year that my father began a career at this same campus. So George Klein and his colleagues developed the electric wheelchair.

And then similarly, the university I went to hear in Ottawa, Carleton University, when it was built, it had tunnels linking all the buildings together. And the value of this was perhaps to keep people warm. But it meant that people in wheelchairs, or scooters, or had other mobility challenges found Carleton University to be the most accessible place to go to school in Canada.

And because it attracted more people than typical who are living with disabilities, Carleton became specialists in accessibility. Which means that they invented the Accommodation Center in universities. The Paul Menton Centre, now around for over 25 years, is world class and has been studied by many.

And because of the focus on accessibility, I just happened to be a Carleton, I learned so much. And we started something called the Carleton Access Network here in Ottawa. And today-- well, in 2018 we were able to arrange government funding for the first-- this is a world first-- an interdisciplinary graduate program in accessibility at Carleton University.

And so what it meant was-- and eventually it resulted in what's now called the Accessibility Institute-- the ability for any discipline at Carleton to have an accessibility component baked into it, as well as having a program specifically for people who wanted to include inclusive design in their curriculum.

Now, also the type of industrial design going on at Carleton University leads to-- there's a remarkable NGO here in Canada, and they specialize in coming up with technology for helping people who are living with disabilities. And there's one technology I want to show you, which is my favorite of all of them, called the LipSync.

And the LipSync-- here I've got a LipSync right here. I'm going to swing it into the camera here. And what's amazing about the LipSync is that it's-- I can take my computer or my laptop. I'm going to grab a phone, and take this USB-C connector that's connected to the LipSync, plug it into the phone.

And now, because the LipSync has a classical sip-puff device on it, it means that by blowing or sucking on the tube, like so, it's equivalent to me clicking a mouse, left-clicking a mouse. So I'm now seeing a mouse on my screen, big mouse on my screen.

And then, now, the LipSync also allows me to move this left and right. (MUFFLED) And so I'm moving the mouse around. And now, I can see what I want, [INAUDIBLE], focus, blow on the tube, and I'm-- launch my app.

And so the LipSync is also affordable. Because we've had sip-puff devices around for almost 15 years. And they can be expensive. And something that could actually allow you to move the mouse at the same time rather than using a head mouse, way more expensive. But the LipSync is printed on a 3D printer.

So you can make your own LipSync by downloading the plans from the Neil Squire Society's website and then printing out your own LipSync. You need an Arduino board, which you can get from Amazon for maybe $29. And you can build your own LipSync.

And so we were in, for example, before the pandemic, I and one of my colleagues we were in Islamabad, Pakistan, doing an event for the Pakistan government. And they were like, wow, that LipSync's amazing, because we brought one along. And they said, where can we buy them? And I said, you don't have to buy them. You can make them yourself in the maker lab down the hall. So very cool.

And this is one of about 50 cool things the Neil Squire Society has available. So you can go to their website and see the rest.

Now, continuing on the idea of education and innovation, I want to tell you another story. I'm going to tell you a story about a guy named Charles Bliss. Charles Bliss grew up in a town that's now in Southern Ukraine called Czernowitz. It's actually where my grandparents-- one of my grandparents was born in Czernowitz. It's how I became an immigrant, because people didn't get along with each other so well there. And so a lot of people got out.

And so Charles Bliss goes to school. He's an electrical engineer in Vienna. And the Second World War breaks out, and the Nazis invade Austria. And Charles, born Karl Blitz, is Jewish. And so he's rounded up, and he's sent to the Dachau concentration camp, and then Buchenwald.

But Karl was married to a non-Jewish German woman. And she was able to talk to the government and convince them to instead deploy him to the ghetto in Shanghai, China, which was a better place to be than a concentration camp. And they went together. And they lived out the war under Japanese domination in Shanghai.

Now, why is this important? Because Chinese and Japanese have pictographic alphabets. And so Charles learned, while surviving this ghetto, he learned the Chinese approach to pictographic alphabets.

And he decided, having grown up-- everywhere he had lived, people didn't get along so well. He decided that the key to world peace, that once this war is over, he could make sure that we can all live in harmony if we just had a way to write down all our languages with one system.

And so he invented something he called Blissymbols. And I'm showing this sentence here actually in Blissymbols. In fact, if anyone wants to guess at-- you could guess in the chat-- as to what this sentence says with these five symbols. I welcome this. I'll even send a prize, of my book, *Do Good Design,* to the first person who gets it right, if anyone wants to guess what this says. And essentially Charles had developed about 900 symbols in his system.

And [? Steffy. ?] Hey, Steffy. Steffy is suggesting, I love going home. That's the closest one so far. I love going out. That's even better. We're getting closer. Thank you, Kim. Todd's, I love to walk outside. It's even-- I love to go out, still more true.

[? Maristela, ?] close but no cigar. Person feeling sad. These are really good suggestions. The closest suggestion that's correct would be Tod Emko. And so, let's see if we can get Tod Emko's email address. We'll make sure we send him a copy of *Do Good Design,* an accessible PDF.

And so here's how it works. So the first symbol-- thank you all. So the first symbol is the symbol for a human, which is this upright line. The one means I. I think you guys all figured that out, because the one is the first person, rather than the second or third. The second symbol, the heart, is the symbol for feelings. And the curve is a want.

Now the upside down V above it-- and I'm doing my best to audio-describe this, so I hope I'm doing a good job. The upside down V above the heart means it's an action. It's a verb. And so it's not a physical heart. And so all actions around wanting or emotions have the heart.

And so now we have "I want." And think you guys got that pretty good. Or an I love. But this isn't a love, this is just an I want. The third symbol looks kind of like two legs walking. So it's a little ablest, but it's the verb. So it's not legs, it's to walk, it's to go.

And then the last symbol is a compound symbol where the first symbol is a building. It looks like a-- it would feel like a monopoly piece for a house. And then along with it is a symbol Charles came up with was for a movie. And these concentric circles indicate a movie reel. And then the arrow pointing out of this movie reel means a projector of movies. So "I want to go to the movies" is actually the exact meaning of this sentence. The beauty of it is no matter what language you speak, it works.

And Charles and his wife were convinced they could make the world a better place. They survived Shanghai. They survived the war. They moved to Australia. They sold their house. They spent every dollar they had printing up 6,000 copies of Charles Bliss Symbols book.

And they sent them to every world government on the planet and NGOs. And they didn't hear back from anyone. And they were sad. And they were broke.

Until 1971-- fast forward, Toronto, 1971. Shirley McNaughton, a young nurse, is working at a place at the time called the Ontario Crippled Children's Center. It has a better name now.

But Shirley was working with children with cerebral palsy. And she was she was new to the organization. She'd been there only under two years. And she was really having trouble figuring out how to communicate with these kids. And she was convinced that they were clever as any other kids, but they just could not communicate because of their cognitive differences.

Now, most of the doctors and nurses there said, Shirley, it's not going to work. You're crazy. It's not going to ever-- you can't teach language to these kids. And she's like, I don't know. I don't believe it. We have a washroom symbol. That seems to work.

So she goes to the library in Toronto. And she tries to find anything she finds. And what does she find? She finds a copy of Charles Bliss's book about Blissymbols. Never has been checked out from the library before. [LAUGHS]

She takes it back. She shows it to her colleagues. They start working with the symbols. And within days, weeks, kids are learning, perceiving, expressing themselves, coming up with their own symbols. It's a breakthrough. And so they write a letter in Blissymbols. And they mail it off to Charles in Australia. And weeks later, Charles gets the letter. And his wife gets the letter. It was like, oh my gosh. And Charles gets on a plane and flies to Toronto and works with them.

The Ontario government ends up providing them with a graphic designer so they could formalize the look of the symbols. And they come up with a book of 900 symbols. And then the Canadian Standards Council helps make it into an ISO standard in the 1980s. And Blissymbols is now used in over a dozen countries in the world.

The story goes on. It gets political. But however, that's amazing. And it all starts with someone who believed that they can make the world better, and someone figuring out how to include more people.

Now, segueing to phones and audio, because we've talked about mobility challenges, cognitive challenges, and vision challenges. Now, audio-- it was only seven years after Confederation, that's what we call when Canada became a country, Confederation. So seven years after Confederation, Alexander Graham Bell is by a lake-- sorry, by a river in Brantford, Ontario, and dreams up the telephone.

And then in 1999, not that far for Brantford, Blackberry revolutionized how people use the phone for sending messages back and forth. So we have a history here in Canada of working on phones and telecommunication.

However, the community in Canada of people who are deaf or allies has done a lot of remarkable things. I'm just going to show you a few of them. So in 1993, for example, we invented in Canada what's called the 711 service. It meant that people using a telephone relay, like a TTY machine, just had to dial 711, no matter anywhere they were in Canada, and they would get connected to the relay service.

And so Canadian-- our friend Jim Roots actually championed this. He convinced the entire North American telephone system to reserve 711, just like 411 or 911 is reserved. And now it's the case to this day that anywhere you go in North America, the Caribbean, you can dial 711 and get connected to the telephone relay service.

Another world first in the area of helping everyone perceive was in 2000, Henry Vlug-- Henry was the first deaf lawyer in Canada, from BC. And Henry, he pushed a lot of that. I think he filed something like 300 lawsuits in his life. He's no longer with us.

But he leaves behind a remarkable legacy, because although you see captioning on TV in different parts of the world, Canada was the first to insist that everything must be captioned. Henry held the Canadian lawmakers' feet to the fire as to what they promised.

And as a result, everything's captioned in Canada, not just the show, not just the reruns-- the commercials, the promos, every interstitial network identification, everything has a caption in Canada. It's part of our-- because it was promised in the Broadcasting Act, and Henry made sure it was real.

Another technical-- this is getting pretty nerdy. And Canadians, we're good at nerdy. We're good at project management. And so if you look at WCAG, if you're a web developer nerd, you know you need to caption your videos. But it doesn't say how good the captions have to be. Even American legislation talks about, oh, your captions need to be 95% accurate. But how do you measure that?

Well, some really bright Canadians led an international consortium to develop the NER. And the NER is a way to actually quantify caption quality. It develops, there's a thing called an NER accuracy score. I could send you a whole bunch about it. But the idea is that now the NER is being adopted by a variety of countries to be able to actually say, are our captions good enough or not?

Now, and this thing about us getting involved in standards and system design, it's a very Canadian thing. I'm thinking, Canada, we're a country of immigrants and Indigenous people. And I think the reason we're kind of inventive, as well is really good at project management and coming up with rules and systems, is that frankly, if you're an immigrant, you come to Canada, it's probably way colder than where you came from. And if you were going to get through the winter, you are either going to have to be inventive, and you're going to have to be clever enough to learn from the Indigenous people who were already here.

And because there's only often one harvest a year. So those who couldn't adapt had nothing to eat. But those who did-- I think this is part of why we Canadians also are so friendly with each other.

Anyhow, so we tend to, for whatever reason-- if you look on the standards committees, whether it's W3C's WCAG committee, or the group that developed international conventions, Canada tends to populate these committees are on a much higher per capita amount than most. So for example, the UN CRPD, the Convention on the Rights of Persons with Disabilities, Canadians punching above their weight class in terms of getting that done.

2016, the Marrakesh Treaty became a reality. The Marrakesh Treaty, which allowed copyrighted works to be converted into accessible formats without people having to hunt down who owned the copyright and figure it out-- a breakthrough for sharing knowledge globally.

And in fact, I'm showing a picture here of Canada's Minister, Carla Qualtrough, a legally blind minister, celebrating when Canada became the signatory to the Marrakesh Treaty, which turned it into an international treaty. Because we had to have so many people signed up. And so Canada was officially the final one. The US signed a little later. 63 countries so far.

And on ISO committees-- I'm involved in a number of ISO committees. And when I join these committees and they're about accessibility, like for PDF, or for plain language standards, I'm always thinking, oh, there's probably going to be some other Canadians there. And, indeed, there seem to always be.

Now this Canadian leadership in terms of digital accessibility, well, I was involved with a project for the World Wide Web Foundation. And my job was to look at legislation and practice in over 40 countries to determine how well we were doing as a civilization as part of something called the Web Index, which is a measurement that Tim Berners-Lee's gang makes every so many years as to how we're doing in using the internet to create a better civilization.

And so what we found was, it wasn't a surprise that countries like Canada, the US, UK, Australia, Germany were the leaders in adopting legislative standards. In fact I'm showing a chart here that shows a list of countries or regions in the world and when they adopted WCAG standards.

And the headline of this chart is that Canada was the first nation on Earth to make it the law that you couldn't publish a national government-- a page on the national government website if it didn't conform to WCAG AA.

At the time, this was WCAG 1.0 called level two. But it's the equivalent of what we call WCAG 2.0 AA now. And this was back in-- the decision was made in 1999. The deadline for conformance was 2001. And it meant that Canada had operationalized this, at least at the government level.

And it went deep. And it was thorough. And it resulted, actually, in the harmonization of department websites-- for the departments and agencies of the federal government, it was part of a harmonizing the look and feel. So we started getting what we call the accessibility dividend out of doing things for accessibility purposes that have other power.

And so we developed the standard on web accessibility right here in Ottawa, Ontario, where I stand today. And it resulted in all kinds of good things came together. But we have one of the most admired national websites in the world because of how integrated and logical it is. Citizens don't have to know which department to go to in order to figure out to get something done.

And indeed, one of the most celebrated departments in Canada in this move was the Canada Revenue Agency. This would be the equivalent in the United States of the IRS, the Internal Revenue Service. Because it was found that-- at the time, we did a strategic study. And we found that at tax time, at this time of year, it costs $26 every time someone in telephone support had to pick up the phone in order to answer a question from someone trying to do their taxes. But it cost only $0.06-- 6/100 of a dollar, if they could self-serve.

And so the millions of dollars that were saved, part of those millions were by making sure the site was so accessible that a greater proportion of the Canadian public could figure things out without having to telephone. So this more than paid for the whole venture.

Now as well, Canada Revenue Agency-- because they had to-- had to figure out how to make fillable forms. And I'm using this as an example of the ecosystem that built up in Canada around helping the Canadian government get this thing done of having a publicly-facing accessible presence.

So a company in Toronto, at the time I believe it was called Delrina, actually developed the idea of an electronic fillable form. And these fillable forms would have to be accessible. Now eventually that company was bought by another company, Jetform, I think. And Jetform was bought by Adobe. And now we all use PDF forms all around the world.

But it starts with inventiveness here in Ontario of creating online forms that are fillable, that can be dynamic, and that, of course, can be used by everyone. And even to this day, Canada Revenue Agency arguably has the best competencies I've ever seen on the planet of creating accessible fillable forms that people can really use.

So the government of Canada had set this pace in the early 2000s. But then, we're a federation made up of provinces, just like the United States is made up of states, Germany's made up of states, were made up of provinces.

Now, the government of Ontario decided they would pass legislation called the AODA in 2005, where they said, not only government would have to be accessible publishers, but anything public-facing from the private sector and from NGOs, from any organization in Ontario that had at least 50 employees, had to make their public-facing websites accessible by a certain date, first to WCAG 2.0 level A, then AA.

And the deadline for that has long since passed. And so again, we ended up with this ecosystem of how we get everyone to be able to potentially create public-facing websites that are accessible.

And Manitoba followed with their own act, and Nova Scotia, and British Columbia. These are all provinces in Canada, because certain things in Canada are legislated provincially and certain are nationally, federally. And so these were provincial matters.

So now I get to-- I live in a province where it's against the law to have a form that's next to impossible to fill out, because it's the law. All public-facing sites have to be accessible. Now, AODA was a lot more than websites. But from a digital perspective, this was a world first, Ontario's AODA.

Now, that experiment-- which had some weaknesses as well as strengths-- that experiment played out. And it became a template for others to use. So I remember being in Norway in the early 2000s-- sorry, in the early 2010s-- and meeting with the government there. And they were busily studying the Ontario approach to see if they could adopt it.

And indeed, Ontario's approach to information and communication accessibility was adopted in other provinces, such as Manitoba, who published their regulations just last year. And their first deadlines-- well, they're coming up this month. We just passed our first deadline for the Manitoba government to also conform to WCAG 2.0 AA.

But Norway took the Ontario model and adapted it very closely, and rolled it out throughout Norway. So then in Norway it was now the law that you had to have a WCAG 2.0 AA conformant approach. And they even upped the bar. They took away the minimum of 50 employees rule.

Now, and what was interesting for Norway is because in Canada, we have more than one official language, they were especially intrigued, because Norway also has more than one official language. They also have Indigenous populations. So the similarity between Norway and Canada was strong. And so they adopted our model. And then Israel adopted the same model.

And then the EU got very interested in what Norway was doing. And this resulted in, contributed to the EU developing what we now know as EN 301 549, which is a standard for procurement. And it includes WCAG 2.0 AA. And it's actually includes WCAG 2.1 AA.

And EN 301 549 has been adopted at the 2.1 AA level now. And this is something coming back at Canada. So Canada looks at this and says, hmm, interesting. Maybe we should go up to 2.1 AA as well. I'll show you that in a moment.

But first, I want to-- I'm showing first a screen where I'm developing a list of all of the jurisdictions on the planet who have either adopted or planning to adopt WCAG 2.1 through the EN 301 549 global standard. And there's actually more countries in the world today that are governed by legislation that demands WCAG 2.1 than 2.0.

And so in 2019, here in Canada, we passed our Accessible Canada Act. And the Accessible Canada Act had some world firsts in it. I want to just show you several of them. But part of the regulations of the Accessible Canada Act is it applies to organizations that are federally regulated.

So for example, in Canada, whereas education, like universities and colleges, are regulated at the provincial level, other things are federally regulated, like airlines, and inter-provincial travel, and certain devices, and measurements, and trade standards. So the Accessible Canada Act is going to apply, of course, to the government itself, all government agencies, crown corporations, and departments. But also, as the regulations are being published-- and they're still being developed, some regulations have been published, some haven't-- but the Accessible Canada Act obligates organizations across the country to conform.

And in doing so, the federal government wisely created something that was first called CASDO, but now is known in more plain language as the Accessible Standards Canada. And Accessible Standards Canada is an arms-length organization that just develops accessibility standards.

And this is something that could be learned from. Because the Accessible Standards Canada then is developing a series of standards. So for example, I'm involved in the plain language standard, an accessible plain language standard, which is a world first. And in doing so the standards are designed not just to be used by the federal government but, for example, any province that comes along that passes its own legislation could say, ah, we're also going to use that as the standard we have our regulations point to.

Anyone on Earth could decide to point to standards within the library of standards that Accessible Standards Canada is in the process of developing. And so far, there's over a half a dozen of them in development.

Now, meanwhile, the federal government decided that this WCAG 2.1 thing, this EN 301 549 standard, which was developed by Europeans, is valuable to us as well. So already, the best practice within the federal government of Canada already is to have departments and agencies conform to EN 301 549, as well as memorize that, because I've been trying to say it for two years now, and it's still like, EN 301 549. I mean, there is a cognitive challenge.

And EN 301 549, because it points to WCAG 2.1 AA, has now become the best practice standard for all Canadian government. And not just in public-facing stuff, but internally-facing stuff, as well, when procuring software, when developing intranets. And so it's such an exciting time because we have this global standard that is building.

So if you're a software development company, you know that if you develop your product for, let's say, organizations in Canada, it's also going to work for organizations in Europe, organizations in America, organizations in anywhere in the world that has adopted the EN 301 549. The EN 301 549 is what I'm trying to say is, it may have started in Europe, but it's a global standard.

And indeed, the province of Ontario, I mentioned earlier, was the first place on Earth to have legislation that demanded that private sector organizations also had to meet or exceed a WCAG 2.0. Ontario is also-- the current recommendations in front of the Ontario government are that when AODA gets updated, it will also point to WCAG 2.1 and EN 301 549.

Now, something else that's really intriguing about the ACA, the Accessible Canada Act, the ACA, is it recognizes sign languages as the primary languages of Deaf Canadians. And it could be argued, it looks likely that the Accessible Canada Act then is a world first in that it recognizes multiple sign languages. It actually quotes American Sign Language, Quebec Sign Language-- which is the sign language most used in the province of Quebec-- as well as Indigenous sign languages as the primary languages of Deaf people in our nation.

Now, there's a question from Kelly Thibodeau in the chat. And Kelly's asking, do I think that legislation will update to WCAG 2.2 when it's released? Do I know what the release date is and what kind of changes are in 2.2?

Kelly, this is a great question, because it's tempting. For those who are watching this, watching WCAG stuff, you'd know that it's already been-- we're expecting WCAG 2.2 to be officially released any month now.

And WCAG 2 builds on WCAG 2.1 by adding yet more success criteria. The good news is, you don't have to forget everything you know about WCAG 2.1, just like you didn't have to forget everything you knew about WCAG 2.0. It's simply adds more success criteria.

But Kelly, when WCAG 2.1 came out, that's almost 10 years ago when 2.1 was actually published. It took almost a decade for WCAG 2.1 to then be adopted in regulations.

And it makes sense. Because let's say there's new success criteria in WCAG 2.2. Well, software developers, testing tools, programmers, everyone's got to adjust the ecosystem so we're ready to realistically be able to make products that conform to WCAG 2.2.

So last time, it took-- I could be corrected on this, but I think seven years between the release date of WCAG 2.1 and the first time we had regulations that were technically pointing to them. And even those regulations had then deadlines in them that may say, OK, within three years you must do this.

So all that to say, Kelly, it's good to be on top of WCAG 2.2, but it will be years before any regulations on Earth, I would expect, would demand that anyone have a deadline to conform to WCAG 2.2. That's not to say we can't voluntarily embrace it now. However, it's going to be-- EN 301 549 will point to WCAG 2.1 for the time being. Great question.

So now, talking about sign languages though, I want to tell you something intriguing. And it comes back to the idea-- and I said Canada was a country of immigrants as well as people who are already here, here for over 10,000 years, many of them, cultures that were here before immigrants arrived from Europe, from Asia, from South America, from all over the world.

Back in the-- far in the past, sign languages have been used by Indigenous populations in North America for a long time. We don't know how long it goes back. But the statistic we do have is that Plains Sign Talk, which is the current preferred name for something that, more in the United States, we hear it called Plains Indian Sign Language. But Plains Sign Talk was in use by both hearing and Deaf Indigenous people.

And in the 1800s, in 1885, it was estimated there was 110,000 people using sign language. So it meant that people from tribes, tribes that had 37 different spoken languages were having communication between them, between tribes, or between groups using sign language. And so arguably it's the largest proportional use of a signed language in the history of humanity.

And indeed, we learn from studies done at Gallaudet University today, that all children benefit from having sign language in their repertoire, as well as spoken languages. So it intrigues me that-- because I know I'm telling you a lot of things to celebrate. But also there's places where we could do a lot better.

In the same year that the Accessible Canada Act was passed, Canada's Indigenous Language Act was also passed. And it's a wonderful document in that it pins down the rights to be able to-- it recognize that languages are central to identity, especially Indigenous identity, and are deeply connected with the culture.

And the government of Canada has a horrid past of having implemented policies that were designed to suppress Indigenous languages and culture, such as residential schools. And children were forced to attend and forced to not use their own languages. So this is a step in the right direction.

And so by recognizing that there's that link-- also, if we go into that history, if we go back to that history, if you go back to the 1800s, we find that, what are now called-- what are known technically as Canadian Aboriginal Syllabics.

I'm not sure if you've seen this. This is an alphabet, or it's actually a syllabary. It's a syllabic alphabet which allows you to write down a language. And what's special about Aboriginal Syllabics-- I know Aboriginal is not a preferred term these days. But that's the technical name, Canadian Aboriginal Syllabics.

In the 1840s, this alphabet emerged. And the way it works is really unique, in that I'm pointing to these symbols. And how it works is there are consonants. And the consonants gain their vowel by rotation.

So each symbol is actually a syllable. And the symbol is the consonant. So for example, this downward-pointing triangle would be wah, but if I add a dot, it becomes wee, so we harden the vowel. And if the triangle is pointing up, it's a wih, and it gets the dot, it's a why, because it's-- I hope I'm pronouncing perfectly-- it's a hardened vowel. And so each of the four rotations of the consonants tell you which vowel goes with it. Adding the dot tells us if it's a hard vowel or soft vowel.

This is such a brilliant way to record language that arguably, it was so easy for adults and children to be able to learn to write and read using this approach to alphabet rather than the Romanized type of alphabet that was forced on them later, that in-- for example, in the Cree population in the late 1800s, arguably, the Cree population in the 1800s had the highest literacy rate on Earth. And yet, when those children were forced into residential schools, they were forced-- literally forced-- to not use these languages, nor this way of writing things down.

And yet, we have the technology to get this done. We actually have, embedded in the Unicode standard are these syllabics. And every major operating system out there already has that embedded in there. So it's waiting for us. And yet here we are-- here we are in 2023 at the 12th annual GAAD. And although there's so much to celebrate, for all the remarkable achievements we've had in these last 12 years, or in the last 150 years, I find I haven't seen any change in the availability of speech synthesizers or screen readers in Indigenous languages in Canada. In fact, in Indigenous languages throughout North America.

And I mean, it was abominable to deprive people in my country access to their first language back then. And it's just as wrong today. Because let's say you have a blind child who can't actually read and write, so to speak, in their primary language. They have to switch to English or to French. And I don't want us to reach the next year's GAAD without beginning, at least, to solve this problem.

We've been working-- we've reached out to the major players, Google, Microsoft, we've talked to people in the Canadian government. And we've been-- we're a bit frustrated with the pace. But we are devoted to making progress on this issue of making sure there's speech synthesizer and screenreaders available and at least one, if not many, Indigenous languages by next year's GAAD.

And if any of you are interested in helping us with this approach, I want you to consider this. There are so many things that have come true in accessibility in the last even 12 years, let alone 20 years, that would seem complete science fiction.

I don't think there's a challenge out there that we can't meet. We have the ability. We live in-- we get to work in communications for a living. And things that seemed impossible 20 years ago now are common. More people have been liberated in the last 40 years through digital accessibility than all the wars in human history.

So I don't think there's a challenge we can't meet. And we just happen to live in the-- there's been perhaps 7,500 generations of humans. And we just happen to live in the first generation where we can truly choose to leave no one behind. So I think because we can, we must.

Over to you, Elisa.

ELISA LEWIS: Thank you so much, David, for a great presentation. Thank you to everyone that's sent questions in. We are close to the end of our time. But we can try to get through a couple quick questions. And then we can make sure that any of the questions that have not gotten answered in that time, we can certainly try to circle back with those individuals.

The first question that came in is around NER caption quality. Someone is asking if the NER caption quality system applies to university-- sorry, university online courses or videos?

DAVID BERMAN: That's a great question. So NER caption is a measuring stick. Anyone, any organization can use it as a way of applying the measurement.

In Canada, it's the CRTC, that's the Canadian Radio Television Commission-- Communication? The people who regulate broadcast in Canada have already made it the law that NER is how you measure caption quality for federally regulated organizations, such as broadcasters in Canada.

Now, where is your university and college is, they would probably be a matter of choice if they want to use NER. But if you'd like, if you email me, I'll share you a whole bunch of background on that. Because if you're trying to convince someone to use NER, whether they have to or not, I'd be pleased to show you the ropes on that, or connect you to the people who developed it.

I can be reached at Berman@DavidBerman.com.

ELISA LEWIS: We'll send that out in the chat as well.

DAVID BERMAN: That's great. I'm also seeing there's a couple of other questions, if I could jump in, in the Q&A. Julie [? Marabo ?] asks, do we know when the AODA, that's the Ontario legislation, will officially use WCAG 2.1 AA rather than the 2.0 they use now?

So the answer is, Julie, we don't know yet. It's up to the current provincial government leadership to decide when to adopt the recommendations that the committee that I'm involved in made. But we haven't been given a date yet as to when they'll adopt our recommendations to go to 2.1.

Jicky Ferrer, I hope I'm pronouncing your name correctly, Jicky, is looking for an on-premises closed-captioned solution versus cloud solution. Does Canada have hardware that exists?

I think that's a question for 3Play. They are one of the strongest captioning organizations in the world, let alone in North America. We rely on them ourselves. And I'd like to suggest that, Elisa, you could follow up on that one to Jicky. I'm not aware of a Canadian-specific solution of that nature. And then 3Play has offices in both Canada and the US.

Nalita [? Karier-- ?] I hope I'm pronouncing your names correctly, Nalita-- is asking, are there academic programs in Canada to study, train, in accessibility standards? That's a great question, Nalita. Yes, there are several. And again, if you'd like to email me I can send you a list of the leading organizations that are helping people become well versed in accessibility standards.

And then William Holmes is asking, do publishers of educational content in Canada have to conform to WCAG standards? And the answer is, yes, William. Under AODA, for example, there's very specific deadlines as to educational publishers needed to meet. The dates have come and gone.

But the bottom line is, with some exceptions and a lot of nuance regarding formats, proactive versus reactive, yes, all academic publishers who are having their works used in Ontario universities, for example, or colleges, or schools of any age, need to conform to the standard in order for them to be able to publish them in Ontario or be-- in order for them to be procured in Ontario. And there are similar legislation in a few other provinces. And we're expecting we'll have a similar knock-on result when all of the regulations for the Accessible Canada Act have been published.

Dana [? Marin ?] is asking, have we heard of any web accessibility lawsuits in Canada? And the answer is, Dana, yes, absolutely. In fact, one of the most famous ones, the Donna Jodhan case, which helped change the law. And in fact, I showed an example of one earlier when I talked about how the CRTC had its feet held to the fire in terms of enforcing.

However, there's just a fraction of lawsuits in Canada compared to the far more litigious American space. Because in the American space, the rules aren't as clear. The Justice Department has never issued clarity on exactly how accessible a website needs to be to conform to ADA, for example. And so therefore these things need to be hashed out in the courts.

Where in Canada, things are clearer. And therefore we probably-- it's one of the reasons we have far less lawsuits. You're very welcome, Dana.

ELISA LEWIS: Thank you. We are just over time. So we will wrap it up. But thank you, David, so much for presenting and for joining us on Global Accessibility Awareness Day. Thank you to Jared, our ASL interpreter, and to our 3Play captioner for making this presentation accessible. And thank you, everyone, for taking time out of your day to join us and for asking great questions.

As a reminder, we will share a recording of the presentation as well as the slide deck via email in the next few days. And I did put a link to a quick session survey in the chat. So please do take time to provide your feedback on today's session.

And I hope that everyone has a great rest of the day. Thanks again.

DAVID BERMAN: Thank you, Elisa, and team 3Play. [? Casey, ?] who set this up. Thanks to my team as well, Anna, and Cynthia, and Julie, and Khadija, and Maham, and Michael, and Randy, and Sarah, and Zach, and everyone who helped make the show the best it could be. Thanks again, 3Play. It's been a pleasure.

ELISA LEWIS: Thank you.