Annie Mannion: Hi, I'm Annie Mannion, Digital Communications Manager at AbilityNet, head of this year's TechShare Pro conference in London. I'm chatting with Google's head of accessibility programs, Christopher Patnoe, who will be speaking at the event about some of its recent digital accessibility developments. Hi, Christopher.

Christopher Patnoe: How are you doing?

Annie Mannion: Very well. Thank you. It'd be really great if you could provide us with a brief overview of some of the great strides that you and your team and others at Google have been making over the past year. Firstly, I wanted to discuss Sound Amplifier. Can you tell us more about that and what it allows the user to do?

Chris Patnoe: So, Sound Amplifier is an Android app built for accessibility. All of our accessibility tools are free, so this is one of them, and it helps people with these Android devices boost important sound and filter out background noises is using their Android phones. So, it can help you in a noisy room, for example.

Users can customize frequencies to amplify certain important sounds, like the voices of people that you're with, or the voices of a speaker at a lecture and filter out background noises. What's exciting is, in the past year, we released a second version, which we find to be much more intuitive and easier to use.

Annie Mannion: Fantastic. And, I understand that Live Transcribe has also added two new features recently, sound event detection and save transcriptions. Could you describe how these work?

Chris Patnoe: Yeah. So, Live Transcribe is probably one of our most popular new applications. We released it in the past year, and the goal of it is to provide the option for someone who is deaf or hard of hearing, to have a good sense of what's being said. And so, what will happen is the phone will take the voice that's being spoken and will provide a transcription of it right in front of you.

It supports 70 different languages and if you don't want to talk back, or if you're not able to talk back, you can even partake in a conversation by typing a response back. So, it's not really the replacement of an interpreter, but it's a good next best thing.

So, that's the core of the product. The things that we added in as most recent update is the ability to save transcript. So, you can tape the conversation, like a school lecture, and save it out, take it out, and you can start to work with it.

That's a pretty focused use case, but the thing that most people really will be able to appreciate is, in addition to trying to translate speech, is you can see, like when a dog is barking, or when someone's knocking at the door, they're called sound events, and you can see the sound events and they're little dots, the little squares, at the bottom of the screen in different colors so you could recognize them and it tells you when it's applause, or there's music in the background, or clapping, or laughter, and these things are important to understand what's happening in the world around you.

Annie Mannion: Definitely. Yeah. And, something that we've been reading about is Project Euphonia, and it has a great story behind how it came into fruition. Can you share what this is and how it came about?

Chris Patnoe: Yeah. This is a really exciting piece of research. It was invented by a man named Dimitri Kanevsky, and Dimitri went deaf at one years old, and he was raised in Russia. So, he learned English by reading a written phonetically. So, his spoken pattern of English is not typical. Sometimes it will be high, it will be low. So, it's this combination of deaf and Russian accents, and it's sometimes a little difficult to understand at first.

So, him being a researcher in speech, we created a model that allows him to be understood very clearly just by recording his voice, using different expressions. The team recorded his voice and trained this model on it, and now we can understand him as well as someone who's worked with him for a long time, sometimes better than me, even.

The neat thing about this is, even though we designed this for him, the core technology of Project Euphonia can help anyone who has non-typical speech patterns. So, one of the things we're trying to do by talking about this, is to have more people contribute examples of a speech, and that will allow us to create a model that works for more than many. Eventually, we want to create a model that it works for everyone, or nearly everyone. We don't want to have different models. We want to have our standard model be good for everyone.

And, what's cool about this is, we can even start expanding into non-speech patterns. So, say for example, there's a person with ALS, they can make utterances or even physical expressions of their face. By understanding these utterances, we allow the technology to trigger something, like a word, or even, one of my favourite clips is there's a fellow watching a sports game and he's able to trigger the sound of a horn because he's excited by what happened in the game. So, here's someone who can contribute in real time into the excitement of what's happening within the game.

Annie Mannion: Really important to be able to take part. And, another tool we're particularly interested in is the Accessibility Scanner on the Google Play store, which has, so far, tested approximately 3.7 million Android apps and with something in the region of 170 million accessibility issues having been identified. Can you explain what app developers learn from this scan when they upload it?

Chris Patnoe: Sure. And, those numbers are old. I think we would probably be close to over 4 million apps by now. Hopefully, I'll be able to have some updated statistics at TechShare Pro, so stay tuned for live updates.

Annie Mannion: Okay, great.

Chris Patnoe: But, in terms of what the Accessibility Scanner does, well, it starts from the Application Accessibility Scanner that is a free application that you download on any Android phone and will tell you, on a per screen basis, what could be improved in your application, in terms of making it more accessible, like contrast, labels, hit targets, and things like that.

So, what we did is, we took that same brains of the accessibility scanner and put it into the cloud. So, we actually run the same Accessibility Scanner, it's brains, on every application that is uploaded to the Play store. And, by doing that we come up with a report and screenshots and recommendations on these things that could be made better.

So, by virtue of being on the Play store, we get this on every application that gets submitted to the Play store, whether they wanted or not. And, that gives them an opportunity to learn more about accessibility and learn more what they could do to make it better. The uploader then receives this pre-launch report, which includes the app, and then, you can get a sense of how you're doing.

We're not really ranking against one person or another, but you get a sense of your own promotion of progress, in terms of making your application better, because you'll know how many recommendations you had on one build, you'll see how many recommendations you have on the next build, and you can get a general sense of your improvement.

Annie Mannion: And, can you tell us a bit more about the new font that you've introduced to Google Docs that can aid visual crowding issues for some users?

Chris Patnoe: Yeah. So, we've introduced a font called Lexend into Google Docs and it was designed to be useful for students to help people read. And, what we've learned is that actually helping some people who are sensitive to visual crowding. So, they weren't created explicitly to help with dyslexia, but they've been shown to help some people with comprehension while reading.

Annie Mannion: Okay. Yeah. And, finally, please, can you share what people might find on the new Google Accessibility playlist?

Chris Patnoe: Well, you'll find everything that we built on the Google Accessibility playlist. And, I can't say what's new because I don't know who's listening to this when. But, the reason we created it is, we realized it's very difficult for someone who's not immersed in what we're doing to find what we have. So, we had a situation where the Chrome folks were doing their videos, the Assistive folks did theirs, G Suite did theirs.

And, it's really hard for someone to find out about all of the work that we've done. So, we aggregated all of these YouTube videos and we've gone back in time to all the videos we've created over the years, and we put them together on a single playlist. So, you can go to one spot in YouTube and find the thing that you've been looking for, whether it's a trailer for assistance, or how to use the assistant in the home, or how best to use G Suite. Or Chrome, or what's that cool video that we've just recently announced? And, hopefully we'll have many of these as well.

Annie Mannion: Sounds really useful. Well, thank you, Christopher, for sharing those highlights and we look forward to hearing more TechShare Pro in London later this month. And, for people who are listening, Christopher will be speaking among a panel of experts on a variety of tech and accessibility issues including ethics, disabilities, and machine learning, and also creating a network of accessibility champions.

And, before then, you can read about Google Accessibility developments on a blog on the AbilityNet website, which is www.abilitynet.org.uk. Go take a look. Thanks, Christopher.

Chris Patnoe: Hey, thank you. Looking forward to seeing you all next week.