

Changing What's Possible - S.2, Ep.9 - Transcript

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SPEAKERS

Alex Dunn, Dr. Marie McNeely

D Dr. Marie McNeely 00:01

Hello, and welcome to Changing What's Possible: The Disability Innovation Podcast brought to you by Cerebral Palsy Alliance Research Foundation or CPARF. I'm your host, Dr. Marie McNeely. And this season, we are excited to bring you extraordinary stories about how disability technology and innovation come together. In this two-part interview, you'll hear from our guest, Alex Dunn. Listeners, Alex is founder and CEO of Cephable, formerly known as Enabled Play. His company is one of the startups in our 2023 Remarkable US accelerator program. And Enabled Play very recently updated their brand and their name to Cephable. And we are so excited to showcase their work. Now, since we recorded our episode earlier this summer, you'll hear us using their previous name Enabled Play throughout our interview. But just keep in mind, it is the same great company with a fresh new name. So without further ado, listeners today, we'll be learning more about Alex his career and his innovative work. So Alex, thank you so much for joining us on the show today. How are you?

A Alex Dunn 01:05

I'm doing great. Thank you so much for having me.

D Dr. Marie McNeely 01:07

Well, thank you so much for joining us. And I'm so excited to dig in here. Can you start by telling us more about yourself?

A Alex Dunn 01:15

Yeah, so I'm Alex. I'm the founder and CEO of Enabled Play. Prior to founding Enabled Play, my background has really been in software product development and applied artificial intelligence. And really, historically, my career has been doing that in kind of the enterprise technology space. So a lot of sort of business to business, SAS products, a lot of work with voice, AI,

computer vision, done some work on the voice assistants, you know, and love or maybe hate depending on who you are, and have recently over the last sort of four years been mostly focused in applying AI in assistive technology and accessibility.

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Dr. Marie McNeely 01:50

Oh, very cool. And as you alluded to, even before you started working on Enable Play, you've actually created some really cool innovations for people with disabilities. And I'm curious, how did you first get into the disability space and perhaps can you go into some more detail about some of your early work in this space?

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Alex Dunn 02:05

Yeah, definitely. So I think like a lot of people, my entrance into the space came from family and friends and seeing through someone else's lived experience some of the challenges faced in access to technology. So more specifically, I have a brother who's a teenager, he's like, 16 years younger than me to age myself a little bit. I'll let the listeners guess. He has autism and dystonia. So the way that affects some of his abilities is in dexterity in his hands. And so back right before COVID, I was up visiting my family for Christmas, and was basically just observing and playing some games with him playing things like Roblox and Minecraft, and watch him tried to play with some friends and also just sort of observing how he was interacting with tech a little bit differently and saw the challenges he was facing with essentially kind of falling behind a little bit. And then that falling behind kind of escalated to being left out and in the context of Minecraft in a single session, not the end of the world, but in the context of what that means in a social environment that can be catastrophic. And then even further than that, what it implies in terms of the education and workforce in the sort of greater future as we depend more and more on the digital world for productivity and learning. When you can't interact with a keyboard and mouse or a controller or a touchscreen, as well as others, there's a natural progression of falling behind further. And that was really what gave my first glimpse into that. And so I dove headfirst into looking specifically at his problem and how to help solve it. And then the pandemic hit, and I had a whole lot of time just being at home. So I got into streaming on Twitch working on those projects, essentially.

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Dr. Marie McNeely 03:41

So Alex, you mentioned Twitch, and that's something that some of our listeners may not be familiar with. Can you explain what it is?

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Alex Dunn 03:48

Yeah, Twitch is a website and an app where people can get online and stream videos of themselves doing things. There's a lot in the gaming community. So a lot of people playing games and talking with the chat. So there's a whole chat that you can talk within as a viewer. But also there's a lot more than games as well. There's other people like what I was doing writing code and building projects, there's people who make music, there's people who just stream their everyday life that you can go basically fine streamers that you're enjoying their

content from and the websites just twitch.tv or you can download the Twitch app. So we started with things as like, I think the very first version was we hacked like an echo dot the Amazon Alexa device into using it as an input for a keyboard to play computer games. And it was a whole journey of making that happen. And once we got that working, we sort of started looking at I guess I say we it was me and chat because chat was also super helpful. All the friends and family and other people learning how to code in chat on Twitch and we kind of like continued to explore more ideas and different inputs and beyond just having my brother try it out. Also just being introduced to more people with disabilities and having them try these different inputs and controls really at first in gaming but then continuing that in was starting to work with schools and I sort of had come to the realization that there's a lot more impact that can be done if this was focused on.

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Alex Dunn 05:06

And that was sort of the driving force for what eventually became a Enabled Play. But there's some really, really fun projects in there, we did things like turned Snapchat into input. So you could do things like hand gestures, and eyebrow raises. And it was like the happiest project I think I've ever created. But it was the first foray into using a phone camera as an input to a computer. So totally separate device with a camera like now that's actually like a core part of Enabled Play. And we do it ourselves rather than than using Snapchat. But it was this really hacky thing where you one to install our app on your PC. And you had to have these little hardware devices that was an Arduino. And then you had to install another app that we called the snap reader. And then you had to install an Android or iOS app that we built that would then open up Snapchat with our custom lens. And that custom lens would then watch your facial expressions or hand movements, and it would just show QR codes on the screen, because you can't like send data out from Snapchat if you're building custom lenses. And thank goodness for that, because it'd be a huge data privacy issue. So the way we want around it is we have the app, you would plug your phone into your computer, the app on the computer would read your phone screen and check for those QR codes. And then if it detected one of the QR codes, and then it would send the commands to the little control box, a little Arduino that would then actually do something so like totally crazy roundabout way, but like it actually worked pretty well. And there's some videos out there of playing like fall guys and Call of Duty with just Snapchat on and like some wild filters. But it could detect things like moving your eyebrows or doing different hand gestures and things like that. And then you combine that with what we already did with voice and some of the other inputs and configurations and ended up being like a really nice rounded implementation that a few people use for a while until we ask them to please stop using the hacky implementation and actually just use Enabled Play directly.

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Dr. Marie McNeely 06:51

Well, I love that a lot of the work that you've done, it has these applications both for play, like you mentioned playing computer games, but also important applications, like you said for work and productivity and just being able to use technology in your everyday life. So what is that balance? Or maybe what was the motivation, just start with computer games.

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Alex Dunn 07:07

The motivation was honestly just that when you're streaming on Twitch, you have to kind of be entertaining, and it's far more entertaining to watch someone play games with their eyebrows than it is to watch them like edit a Word document, or do something else. But in the end, it's all the same low level keyboard and mouse or like the game controller, the called game pads technically in terms of the HID standard, but it was essentially just doing those same low level things, which means that no matter what the program is you're running on a computer, we should be able to make it a little bit more accessible with taking those same low level controls and just giving you a new means to create them.

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Dr. Marie McNeely 07:41

I think that is phenomenal. And perhaps we'll talk next about Enabled Play specifically. So what maybe motivated you to go from these earlier projects to founding this company establishing Enabled Play and how did you get started on that particular path?

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Alex Dunn 07:54

Really, the motivation from the projects is what carried into Enabled Play. But what sort of was the decision maker of okay, I need to actually make this a thing, not just a project was just so much validation that was kind of organically created around the projects. And at the time, it was called Suave Keys was the name of the project we were creating on Twitch. And basically, we had a handful of people using it and just having conversations with me and hearing about the direct impact it made on their lives. And then learning about how many people were just like them, that we could also help support people that they were friends with, that they were in different communities with and we're trying to introduce to but the setup was like too hectic and crazy and hacky it was that and then also some market validation too, where we started seeing some interest from brands and from the press around the project. So it was enough to say like, okay, there's something here and there was like a few different steps along the way. There's something here, there's that with the technology like, okay, there is something we can do with using voice in a different way to control low level technology. Like there's something they're. Using Snapchat as an input, there's like, okay, there's something there for like taking a phone or a tablet camera, but then using it to control a PC or an Xbox. And then as more people use it and give feedback, it's okay, there's something there with the level of impact that we can create. So I sort of made the decision and wanted to graduate it from a project to production software and devices at the time. The continuation of that was the way to sort of bootstrap it was those projects that I created. I also submitted in a couple of different global hackathons. So with Snapchat that was done as part of a hackathon for the Snapchat developers, there was to from Microsoft, there was a couple from like the Amazon team that they were running. And there's a website called dev post, where a whole bunch of companies sponsored these hackathons. And there's cash prizes for some of them. There's other like physical prizes, like there was one where people were giving away two different Teslas and stuff. But they're global, and they're very competitive. And ultimately, another piece of validation was winning those hackathons with the projects we were working on was also like, clearly there's something there. The businesses that we're talking with with Microsoft and Snapchat like see the value as well, not just the end. users who are using them, there's something there. And then the money from that was what was used to actually bootstrap the creation of the company.

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Dr. Marie McNeely 10:06

Oh, that is amazing. And I know you were coming into this definitely, as a technical expert, was it difficult to pick up all of the business knowledge?

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Alex Dunn 10:13

Not so much. Prior to Enabled Play, I was the chief product officer at a company called Voicify. So outside of the technical background is in enterprise product development, and ultimately helping sell that and grow it and growing teams. So none of that was particularly new. There's definitely some things that have come up since then, because even when I originally made the company, it was still meant to be more of a sort of passion project business. And I didn't have the full intention of growing it into what it's becoming now, that isn't changed. And going through the hurdles of starting off as an intentionally small company to a growing company that it's been sort of pushed into organically again, there's been some interesting challenges there. But otherwise, yeah, I have experience in building companies. Enabled Play's, not my first startup, I've had a few others. For example, I dropped out of college originally with a startup that I had built, and ultimately had exited from. And that was the first foray into it. But since then, I've done it a couple times.

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Dr. Marie McNeely 11:08

I think that is so cool. I'm curious, can you tell us for listeners who might not be familiar with Enabled Play as the company, what is the mission?

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Alex Dunn 11:15

Our mission is to level the playing field for people with disabilities, and basically everything technology access, we're doing that by creating a human computer interface that actually adapts to each individual. So their abilities and their preferences rather than asking individuals to go buy expensive devices and hardware and having to learn and master those being able to take any of these existing tools that are out there, and just making them accessible from the ground up, and then helping our users find more accessible technologies, whether that's games that we integrate with, or services we work with, or even just other pieces of assistive tech that are outside of what we have out of the box that we think enable play can play well with. Our goal is to create a community of people who are just using these more adaptive and modern controls in different ways and sharing those ideas and fostering growth within that community as well, not just on the sort of selling of software.

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Dr. Marie McNeely 12:05

I love that. And can you comment specifically on what problems your products or services solve for people with disabilities?



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Alex Dunn 12:11

There's something for everyone in Enabled Play, that's our goal. But we very much focus on supporting individuals who have difficulties using traditional input devices. So things like a keyboard or a mouse or a controller, and augmenting those with ways that work with your abilities, and then using that to automate on top of those low level controls. So the problems we solve is in education access. So being able to keep pace with the rest of the class, and not being limited by difficulties with using a keyboard, in computer labs, or even on laptops that a lot of schools are using, at least in the US and Canada where we mostly focus, we also solve problems in creating intrinsic motivation and therapy sessions. So we do a lot of work with clinicians, occupational therapists, and speech therapists, in order to use enable play as inputs in things like our face Expression Controls to detect different movements or body gesture controls for detecting different movements, our speech, which includes not just typical speech recognition models, but recognition models for nonverbal users as well to help them actually develop those skills and use it to play games in therapy, rather than having to just do these repeated sessions independently in front of a therapist or any other clinician. And then it's about leveling the playing field, in online games, and in workplaces. And in financial access and independence. And just about everything, where there's already digital touch points, there's so many different ones, but really, it's about leveling all of them, so that you can just control those in the ways that worked best for you as an individual.

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Dr. Marie McNeely 13:38

I think that's amazing. And I love the different variety of options that you give people, like you said, they can use facial gestures, they can kind of use their arms and have different gestures that they use that way to control it speech or sound. I think having that flexibility is really important to make it applicable to as many people as possible.

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Alex Dunn 13:53

Exactly. It's all about having options, that was really the problem, you grab a laptop and you want to use it, you have the option of the keyboard. And that's it to type in. Sometimes you'll have things like dictation out of the box with Windows or Mac, but it doesn't really go further into the actual control and the personalization, we wanted it to be about options. And when you have as many options as possible, then, in theory, there should be fewer barriers to being able to interact with others online or be as productive or have the same level of controls as anyone who's using the out of the box inputs to.

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Dr. Marie McNeely 14:26

Absolutely. So maybe let's talk next a little bit more about the Enabled Play app. So how would someone use the app? And what are the different components of it?

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Alex Dunn 14:35

The app is available on iOS and Android as well as Mac OS and Windows and it should be on Chrome OS shortly as well. So from any and all of those, and I should clarify basically download the desktop app where you want to control that computer and then you download the mobile

the desktop app where you want to control that computer and then you download the mobile app to basically create more inputs. So like I was saying what we did with Snapchat back in the day with your phone's camera being the input. You can do that by having the app in both places, but essentially download the app. And then you can personalize your different control profiles for what you're trying to do, or use out of the box ones that we can create for you or use ones that the community has shared. So those profiles are essentially the configuration that contains what inputs you want to use. So for example, what voice command do you want to use? What face expressions do you want to use? What body gestures? What virtual buttons? Do you want to tap? What tilt controls, you want to use all the sorts of different inputs that we can support? Or what other external commands from other devices or software? And then what do you want it to do when you receive that or send that command? Like what should happen when you raise your eyebrow? Should it just be the click of a mouse. So that's a really common one. Or should it be something where when I raised my eyebrows in Minecraft, it holds down the mining button for three seconds and then moves backwards and then opens by inventory, all other sorts of things in a macro, or do you want it to actually talk back so you can raise your eyebrows and the software will speak for you.

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Alex Dunn 15:56

So all of those things are configured within profiles. And again, we have a lot of those out of the box or can generate them more easily, or others can share them, you then can also share it out. But it's about personalizing those inputs for yourself tweaking where you want to, once you have a profile, then you just assign that profile to the computer you're trying to control. For example, I'm on a Mac right now, I would have the Mac App, and I would click on the button that says my Mac and then I would select the profile that I want to use. And then I would be able to send those inputs from my Mac itself. Like I can open up my webcam within the app with Expression Controls, or I can start voice commands by clicking a button or I could pull up my phone or my iPad and add other inputs. So it's about that flexibility of the controls to create and about the controls that you actually use. Because you can connect as many different devices as you want. For example, we have some users that will use the microphone into their computer for voice commands, they'll use their phone as face expression controls, and then I'll have like a tablet with all the hotkeys or virtual buttons that can be tapped in and sort of a dashboard of all these different controls all at the same time. And also doesn't stop you from using other input devices too. So if you want to use different inputs from a keyboard or mouse, you still can or from joysticks from a controller or any other adaptive input. It's about augmenting basically what works best for you. And so you create your profiles, and then you just within the different apps choose which inputs you're using.

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Dr. Marie McNeely 17:19

Well, I think there are so many cool possibilities. And it sounds fun to just kind of get in there and explore and try different things as well.

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Alex Dunn 17:25

Oh, yeah, it's definitely fun. We get a lot of feedback on people using face expression controls for the first time. I also think it's something that people are blown away by the fact that it exists, people are not as new to using voice in technology, like use dictation modes on your

Mac, you use smart speakers and talk to voice assistants. When you pull up your camera and you see all the details, we're able to track of your face entirely offline, and you start moving your head around and it can move your mouse or it can navigate through a webpage like those moments are really cool. And especially in games that are hyper interactive, like I'm moving my head and therefore my character is moving too and there's that moment of Whoa, I can actually do this now. And then we typically sort of have this progression of like, start with a few different inputs, and then get really comfortable those and then add some more so that ultimately you're using any facet of your body or your abilities or your voice or anything else to automate.

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Dr. Marie McNeely 18:15

I think that is phenomenal. And listeners, were going to pause here for part one of our conversation and pick up again with part two in our next episode. But in the meantime, if you want to learn more about Alex and what he and his team are doing at Cephable, formerly known as Enabled Play, you can visit their website at cephable.com. That's C E P H A B, L E.com. You can also find them @Cephable on Facebook, Instagram, X, Tiktok, LinkedIn and YouTube. So definitely take a moment to to get connected. And Alex, it's been such a pleasure to have you with us today. Thank you so much for joining us.

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Alex Dunn 18:56

Now the pleasure is all mine. Thank you so much for having me.

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Dr. Marie McNeely 18:58

Well, it's been wonderful to chat with you at listeners that great to have you here with us as well. And it would be fantastic if you could take a moment to subscribe and rate or review our show on your favorite podcast platform. And we look forward to connecting again in our next episode of Changing What's Possible.