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The Digital Access Show

Season 3, Episode 34: Luke Irwin

Introduction

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Narelle Hello. Welcome to this week's episode of the Digital Access Show. We have our wonderful cyber security expert, Luke Irwin from Aegis Cyber, back. And he has reminded me before we started to make sure we record, because we have had instances where I forgot to press record. Luke, thank you for coming back on.

Luke Thanks for having me. It's great to be here as always to talk about where these... two areas converge, in what is this really sensitive and complex area.

Narelle And do you know what? For a start, thanks for reminding me to record. I think I'm a bit paranoid. [Narelle laughs] We're here today to talk about something that's in the news. And I'm going to take you back a bit, Luke, way before I met you, when I was still wearing glasses.

Narelle I used to have a tool put out by a company, I think from memory, it's called InVision. It sat on the side of my glasses on the frame of the glasses. So, the weight of the glasses was out.

Narelle So, your line of sight, you know, how they fit the glasses at a technician, that was always out. And it linked to my phone. I could double tap it. I could ask it, describe what I'm looking at. It would read documents to me. Things like that. Very clunky.

Narelle It was a pain in the butt, to be honest. And you actually had to be able to line your head up... to where you were looking at. And you know what?

Smart Glasses and Accessibility

Narelle When you can't see properly, being able to line your head up with... a sign or whatever it was, particularly when there's no sound coming from it, it was really hard to use. Now we're here today talking about Meta Ray-Ban glasses. What do you know about them, Luke?

Luke So, there were some, it's a... camera... glasses... AI-integrated product as released by Meta/Facebook. They've been out for a while, and people were paying attention, but it certainly wasn't the level of... engagement from the press, from the politicians, from the public, while it was just Ray-Ban Meta.

Luke The moment that Kmart started selling their cheap \$90 versions, and they were selling out nationally, everyone was going, oh, my God, what's the concern here? Cause previously, the frames had set you back at least \$350.

Luke That is now a... dedicated decision purchase when you get prescription lenses to go and get a camera-enabled, artificial intelligence-enabled tool. But now you're buying it for \$90 at Kmart. So, that changed the conversation a bit.

Narelle The thing that's frustrating me... is... I've got many friends that use them. Obviously, you know, I'm as blind as a bat. Secondhand, actually worse than a secondhand lawnmower.

Narelle I think we're on about the fourth... age owner lawnmower where the blades, you can easily replace them, but damn, there's a lot of rust in the body. That type of stuff. Sight's very dodgy. And there's a lot of us in the disability world that use them. What do you know about the uses?

Luke So, there's certainly a lot of really good use cases for people with vision impairment. The ability to translate road signs, read a menu, engage in the day-to-day life and convenience that those who are fully sighted can do without challenge or impairment.

Narelle Yep.

Luke It essentially levels the playing field in that regard. And I think it's a wonderful tool when it's used in that context.

Luke But the challenge we have is there are people who... have less than noble intentions, not necessarily of the disability community, who are looking to use these for more untoward or privacy breaching outcomes.

Luke So, on one hand, it's providing benefits and outcomes for the vision impaired, but it's also enabling a new class of creep, for those outside of that community.

Narelle And that's actually really frustrating. I haven't got them as yet, and they were on my list for a couple of years when my sight... stabilises. And friends say, why haven't you got them? I can read a menu independently. Do you know something I look forward to? Being able to find a door independently.

Narelle Currently, I'm reliant on my guide dog. If there's a lot of noise, a lot of people, he's not going to find a door. He can't. I mean, you've been with me with my previous guide dog, Rocket, and trying to find things.

Luke Yeah, and the most recent one.

Narelle And the recent one. And it'd be a case of I would have to say, Luke, you walk. I'll give the dog the instruction, they'd follow you, cause I can't find those things without assistance. And it's, I just think like people with dyslexia, autism to take all the noise out of a page.

Narelle And by noise, I mean all the... decorative stuff and the images and the... All of those things. There's so many uses for it that... It's amazing.

Luke I remember a Christmas party that you and I went to with probably about 100, 130 people there. And I was like, okay. Hi, Narelle, it's Luke here. And you're like, oh, Luke, great. Narelle, I'll hold my arm out. Hold my arm.

Luke I'll take you somewhere you can sit down that's quieter, so you can hear what's going on. But me, my sight's degrading with age, as is my hearing, but that was still a normal environment for me. I had a hard time navigating in those lighting conditions and that amount of noise.

Luke So, seeing how your poor guide dog was handling it.

Narelle Yeah.

Luke But no, so the people with... vision impairment and dyslexia, and other forms of... disability, it'd be interesting to see how these glasses support, I think the term is... dyspraxia. I'm going to be wrong.

Narelle Dyspraxia. Dyspraxia.

Luke Thank you, the math one.

Narelle Yeah.

Luke Because AI sucks at math. Like, it is really bad at math. So, how can these glasses help there? It'd be simply a question I'd be interested to find out.

Inclusive Uses Beyond Vision

Luke But one of the areas, I've had a couple of... high-level conversations on this, so not going into the weeds at all, with hearing disabilities. -

Narelle Yeah.

Luke So...

Luke For a lot of time, like years ago, I was looking at a prototype and working with a team around... building out a prototype, for somebody with a hearing impairment or being deaf, to basically put on glasses or goggles or something.

Luke So, it would take the other party's voice, and translate it into text on a screen inside of it. But what that is doing is... that is forcing the disabled person with a disability to accommodate those who are fully abled.

Narelle Yes.

Luke Which is not a fair or reasonable thing to do.

Narelle No.

Luke So, flip that on its head. What is stopping, say, somebody who is fully sighted, fully hearing from putting on these glasses, and having the person communicate with sign language, and then the glasses translate that into their ear?

Narelle Wouldn't that be awesome?

Luke That is a use case I think is valid. I think it is a great example of where this technology can go, and it's not imposing additional conditions or caveats upon the person... who has the impairment. It's not asking them to take additional accommodations to meet people who are fully capable.

Luke And, because that's just unreasonable. Those who have the capacity to do so, then what's stopping us wearing the glasses, in those circumstances, so you can now fully understand ASL, or BSL, or American sign language, or whatever variant they're doing over at the moment.

Privacy and Data Concerns

Luke And that allows that person to better integrate... into their work community, into their communities as a whole. And... from those use cases, I can see some tremendous, tremendous value there. It does raise some concerns that Facebook is capturing all of this data.

Narelle Oh, okay.

Luke Because it's Facebook. Let's be honest. They're not exactly the most ethical of companies. They're up there with Twitter and all the others that... tend to do naughty things. Jeez, they just got fined \$17 billion instead of \$200 billion the other week.

Narelle How come? See, I'm not even across that. Cybersecurity, security, privacy.

Luke That has to do with how the algorithm, for lack of a better term, entraps and... manipulates the emotion of teenagers, and children. So, they settled for \$17 billion instead of \$600 billion that was being sought. They could see that there was a chance they were gonna lose it.

Luke They took a cheaper path out. From a business perspective, the smart move to make. But there's a heap of changes that need to happen there. But seeing how these glasses that from the general... user perspective... are perceived to be privacy invading.

Recording Laws and Consent

Luke Noting that in Queensland, the rules are different to New South Wales and Victoria. Like, in Queensland, as long as you are a party to the conversation, you are allowed to record the conversation. You're allowed to record video from anywhere so long as it's not an area where reasonable privacy is expected.

Luke Or it is an automatic privacy area like a bedroom, a bathroom, a change room. Years ago, I worked as a private investigator when I tried to get out of IT. All the work I got was about tech.

Luke So I went, I might as well get paid to work in tech, and went back to tech.

Narelle Yeah.

Luke But as one of the examples, we were trained into that. If you're sitting out in front of a house conducting surveillance, and they have not... drawn their curtains in any capacity, you can take a photo of them in their lounge room. That's fine.

Luke Because they have left windows and curtains open to the public, therefore they have not indicated a desire or intent for privacy. If they so much as draw them 10 percent, that indicates a potential intent or desire for privacy, and you must not record.

Luke Now, the problem is somebody wearing these glasses... doesn't understand the nuance of this legislation. Some of these glasses, they don't automatically stop recording... when you go into a change room area, or when you're going to or from a bathroom or a bedroom.

Luke So, the chance of you catching inadvertent material... as automatically private is high. Has the person consented to be recorded in that manner? Now, as I said, in

Queensland, the rules are quite broad. If you're a party to the conversation, you can record it. That's fine. It's not a two-party consent state.

Luke New South Wales and Victoria, different stories. The other person needs to consent to recording of audio. Recording of video, different story. But it creates these complexities.

Workplace Risks and Compliance

Luke And if we look at New South Wales as an example in the workplace, New South Wales has an act... the New South Wales Workplace Surveillance Devices Act, meaning staff must be made aware if they are under surveillance. That can be cameras, that can be tracking apps on their devices and phones.

Luke Staff must be informed that that is happening. Now, if someone's walking through with these recording glasses, and they're a member of management, where does that sit?

Narelle Oh, my God.

Luke Also, if someone's wearing these glasses in the workplace. Say you work in an accounting practice or a legal practice, or a medical clinic. You are going to potentially see sensitive information. Has that party consented for their information to be captured and transmitted... to a third-party offshore server hosted in America?

Luke If you are meeting with a client, or another staff member in the business, and you're wearing these glasses and it's recording that data, is that covered by your company's privacy policy? Cause it's happening on work grounds, therefore your employer must have endorsed it.

Luke And you're now transferring someone's facial likeness and voice likeness to, again, to an American-hosted offshore server.

Narelle Gosh.

Luke We've got these challenges being brought in by that. To use a very bad and a very crude example, every new technology... is generally co-opted first by the adult

industry. So, VHS, VHS was big in the... adult video industry. Broadband streaming and websites came about due to internet adult content.

Luke Where it can be used for that, it'll be the first to move there. We bring in the rules, and then it's a general uptick around the public picking this up and working with it.

Luke What we have now is essentially a gold rush of people... running to this new technology with... inadequate guardrails around it to protect... people who are in potentially in harm's way... from harm.

Balancing Inclusion and Risk

Luke Now, if they clamp down super hard, they're going to cause a problem... for people who have... a sight disability, a learning disability, a reading disability, because this tool can help level that playing field and allow for better inclusion, which is ultimately what we want. We want a more inclusive society.

Luke So, what can we do to lower the barriers for inclusion and make it better? So, finding that middle ground is going to be a very... complex, complex answer to what appears to be a very simple question. We're gonna have to thread that needle.

Luke What can we do to ensure that those... who need these adaptive, supportive technologies can access them, and use them in a responsible and ethical manner, while those who look to use them for more nefarious purposes, it's kept out of their hands? Now, I do find it amusing that they're up in arms.

Luke Oh, my God, these glasses, that covert recording. You've been able to get buttonhole-sized cameras for more than a decade now.

Narelle Yeah.

Luke You wouldn't know, cause it can sit inside a button.

Narelle Yep.

Luke Or sit inside a buttonhole, and you wouldn't notice it's there. So, the technology exists. It's just now commoditised.

Narelle You know what...

Luke [The added flavour of AI.

Narelle The scary part of all of this, actually there's three points I'll bring up. One, the fact that it is being commoditised, a tool, like a lot of things that happen where it's built for people with disability initially, then it becomes commoditised and becomes the norm.

Narelle And then, there's oftentimes, as in the case of this, there's gonna be an issue for people with disability. We can't get away from that, because where we would use the tool and use it responsibly, others don't. Like, a great example is people that actually buy... harnesses to pretend their dogs are guide dogs.

Narelle And that is a problem.

Luke Yeah, "it's a service animal." Is it?

Narelle Yeah, exactly. And, you know, we can look and say, yeah, no. The harness hasn't got the right stickers, or I can touch and know. But a normal person wouldn't.

Luke Oh, spot on. And like, how can you tell that, oh, it's my emotional support dog? And then they get their information from YouTube, and thinking, you can't ask me that. No, that's in America. In Australia, we can.

Narelle Yeah, oh, you can. And you've got to have certain... things on the dog, medals and things. And then you go and look at the second point, is... the... ease, which can be misused. And I never even thought about some of that stuff until we started talking about it.

Narelle Then my mind went to like tech stuff, and being, you know, a techo, I wrote code. We had access to a lot of information, and we should, we have to. A lot of it's UAT, but when you're dealing with production issue, you see production information.

Narelle So, you have access to information that, it's just part of... what you've got to have access to to diagnose the issue, resolve it, and, you know, off you go. But in that, that is an area... that's actually quite scary.

Narelle And I can see the case where they might come in and say, no IT people can use this, because, you know, if you're working in this and this and this and this area, such as a database area or... a network, not network, service delivery... area where... or a maintenance... team where you are dealing with sensitive private information, and it's just part of what we have to do, I can see them saying until they find a resolution, people with... in IT can't use that tool.

Narelle However, what people forget, a lot of people in IT also happen to be neurodivergent. And that is what makes them brilliant at what they do.

Luke Yeah, it's one of the running jokes in, one of the running jokes in tech and cyber. Oh, you're good at tech. Oh, so how far on the autism spectrum are you? Oh, you're good at cyber. How far on the ADHD spectrum are you?

Narelle Yeah.

Luke It's just how it is. It attracts those people because it encourages hyperfocus. Look at, say, taking a more innocuous example. Your waiter, waitress, server, whatever you wanna call them at the restaurant. What if they wear the glasses and you hand over your credit card?

Narelle Which people would, I do it all the time. It's the only way I can pay a lot of my bills. I have to give someone the card so they can PayWay that. I can't do it if the... FPOS machine's not movable, or for whatever reason.

Luke Yeah. Spot on. So, yes, they could certainly copy it down while you're away. There's lots of mechanisms by which they could commit fraud. This just makes it easier.

Narelle Oh, yeah.

Luke So, and that's not to say they'll have nefarious intent. But... It's a risk factor. What if someone's working with, working with, say, credit card details over the phone? These glasses can record audio.

Luke If the organisation doesn't have an institutional policy in place, saying you're not allowed to wear these, what if those glasses have then been deemed to be a reasonable and appropriate accommodation to meet the needs of a disability?

Luke How do we address that while still meeting compliance with the payment card industry data security standards?

Narelle Yeah.

Luke There are all of these. The answer there is you can't, because those rules are quite strict... around what can happen with tech and that.

Luke But it's opening up all these questions of, where technology intersects with human behaviour, and how can we manage the risk while still... supporting those who want to feel more included in society.

Narelle Yeah, it's just... we keep going down rabbit holes, I think, Luke. This is an obvious one, because it's so out there.

Luke Oh, yeah. There's no easy questions in this space, because, like, last time we talked, we talked about how can someone with sight impairment... deal with multi-factor authentication when it's coming through their phone? Again, that's a challenge.

Luke Now, these glasses can address that, because... tell me the number on the phone and, bang, you can type it in. And the point is, I see no concern with somebody with a vision impairment... using these glasses in that manner.

Luke But the use of those glasses has to be factored into corporate... security policy, risk assessments, and rules around how this data can be used. Because you are still potentially taking company data, and piping it offshore to another company.

Narelle Yeah.

Luke So, do you need to be shifted into a role that's dealing with less sensitive information? What if there's a role that you like? But again, we're now crossing into the realm of HR, and the complex areas there.

Narelle And as you said, it's stored on an offshore site. I mean, Meta doesn't have, as far as I'm aware, they've got no data centres in Australia to store information. It's all in the US.

Narelle So, any person with disability as well that is using them on a daily basis, and there's... many, many people doing it. I wonder if they realise just the fact that their information is being stored overseas. Things that they might look at, things, their bank statements, their... Oh, it could be anything.

Luke So, it's... I'd be very surprised if Meta didn't have servers in Australia. I don't know, but I believe they would. But under the US Cloud Act, any US company can be forced to the US government, if so ordered. And that's happened.

Luke It caused a problem for the International Criminal Court, which is causing a whole heap of things to flow on over in Europe, about they're getting off Windows and getting off Microsoft, and using non-American owned technologies... to support their government, because... someone in the US government didn't like... how an international criminal court judge made a declaration, and they went and made this gentleman's life very difficult, because of what they did.

Luke But again, that's down to the Cloud Act. So, your Microsoft data, your Google data, that is an American company. The US government can request that at any time, and seize access to it. Now, you putting your data there that you look at is still a risk.

Luke But how you manage that, the first thing is knowing you're actually doing it. And then you have to go, is there any other choice? Is there any other way we can do this? And at this point in time, I'm not certain there is.

Luke So that comes down to, is this risk okay for me to do? And am I prepared to keep working within it, so we can... achieve some level of... improved society integration?

Practical Advice for Users

Narelle Yeah. Luke, what's some advice you would give to that person with disability that is using these glasses, on a daily basis, to manage their lives, to be independent, and to be also safe and secure in a digital world?

Luke So, the first thing I'd say is... make the people you're interacting with aware... that you are using these glasses to support you... engage with society better. Yes, it is an imposition on you as a person with a disability.

Luke But what we don't want to happen is a highly... negative... engagement approach, from people finding out after the fact... that this was happening without their knowledge, because by them speaking to you, they're automatically granting consent in Queensland. New South Wales, Victoria, different story.

Luke Now, by doing that, you're pre-empting that and that's making, look, I've got a vision impairment. I'm using these so I can help see this, or so I can engage with this. People are generally pretty good people, generally. So, they will want to go, okay, I understand what you're doing.

Luke That may cause them to be careful what they speak about, but that's not necessarily a bad thing. So, open and informed consent is the great place to start. Much as like with everything, get consent. So, that's the first thing, to protect yourself.

Luke With these, one, if you're going to get them, don't use the Chinese version. Use the Facebook version, and I can't believe I'm saying that. But at least with Facebook, we know it's on a Facebook server. When it's being handed over to Chinese servers, we don't know anything other than it's going to China.

Narelle Yep.

Luke And that's a whole separate risk profile, that I don't have sufficient data to provide an accurate comment on other than it's not a good idea.

Narelle Yep.

Luke So, if you have a choice, Facebook over... the cheap Kmart stuff or the other ones, because at least we know... how bad they are.

Narelle Yeah.

Luke It's a known quantity.

Narelle Yeah.

Luke So, that's the choice there. So, be aware of where you're using it. If you need these to engage with your surroundings, your work, have the conversation with your management, with your IT team, with your security teams, so they know what you're doing and why you're doing it.

Luke Otherwise, you run the risk of this being there, a blanket not coming out later, and you're back to being in an adverse position. Now, you're having to defend why were you leaking company secrets. Open, honest transparency.

Luke Yes, it's asking something else to be done on behalf of the person with a disability to engage in an equal footing. However, being the person who's proactive and asking that question saying your boss said, look, I would like to use these.

Luke It makes it easier for me to do my job, because your boss wants you to be productive. It's why they're paying you. It's kind of why you have a job. So, if you can go, this helps me do better at what I do. How can we manage this?

Luke Then you can have the conversations with IT, and have the conversations with cyber, and work out how the business wants to address that risk. And then... you can go forward. They might turn around and go, no, not allowed.

Luke Now, that comes down to a question of, is it or is it not a reasonable accommodation? I don't know. That is a lawyer question, not a Luke question. That is a very complex lawyer question.

Narelle Yeah.

Luke Cause it ties into information security, and privacy and confidentiality, and business IP. But if that's the way your business wants to go, maybe you want to find an alternative employer if you can.

Narelle Yeah.

Luke But again, complex question beyond my pay grade to answer.

Community Interactions and Transparency

Narelle And what about... people out in the community, the average Joe out in the community when he comes across someone that's using the glasses?

Luke So, I've seen both sides of this. I've seen people using it to help with navigation and day-to-day engagement.

Luke And I've also seen a class of, let's call it 20-something men who wear it to walk up to women, and use it as basically pick-up instruction videos, while trying very hard not to stare down their top. So, it's two sides, it's two extremes.

Luke You've got people using it so they feel like part of society, and committed and engaged, and some people looking at it to try and create content... to feed into whatever content generation engine they have. Now, if... If it's just a passing engagement, hey, where's this or where's that? Where can we... Who cares?

Luke If you have an extended conversation with someone, make them aware that you're using this apparatus, so they can be aware, because people's behaviour change once they know they're recorded.

Luke Yes, they may cut back on what they're saying, but what you are doing then is you're setting the... baseline for the relationship, and the engagement through transparency and honesty.

Luke If you engage in bad faith by not disclosing it, that person, when they find out they're online, is going to be quite upset... that you had the opportunity to tell them, but you made a choice not to.

Narelle Yeah.

Luke That is going to lower their trust in you. So, yes, you are being asked to do something else. If you turn and say, I'm wearing vision-supporting glasses, they do do this, just letting you know. If the person has a problem, they can go, can you not do that for this session?

Luke Or no worries at all. That's fine. It just comes out of the person. But transparency and honesty... generates trust. Trust is the basis of all relationships in sales and engagement. If they don't trust you, they're not gonna communicate with you.

Closing Remarks and Contact Details

Narelle Luke, thank you.

Luke No worries.

Narelle Another great conversation as normal. How can people get in contact with you, Luke?

Luke They can reach me on LinkedIn, Luke Irwin. There's two Luke Irwin's actually who do information security, one in Australia, one in the UK. I've actually had some of his clients reach out to me. You can find me on LinkedIn. You can find me at aegiscyber.com.au. So, that's A-E-G-I-S-C-Y-B-E-R.

Luke Always happy to have a chat. Happy to point people in the right direction, because where I specialise is governance, risk, and compliance for small and medium businesses to ensure that... what they're doing is the correct and appropriate amount of security. No point putting banking-grade security on a florist.

Narelle Yes. That's it. Luke, thank you again for coming on. Always love our chats, our conversations. And, look, if you like what we... -

Narelle What was that?

Luke We tend to meander.

Narelle We do, but this one, that was a good one.

Luke Yeah.

Narelle Yeah. I'm now sort of thinking I might hold off... on getting the Meta Ray-Bans for a bit longer. I don't trust Meta. Let's be honest, I don't.

Luke But until we can get a trusted provider, which, again, how much money does it take to become that trusted provider... is the question.

Narelle There is one. There are 6,000, 7,000 grand glasses.

Luke Okay. Yeah. The one thing I'll give Meta credit for is their... image recognition artificial intelligence... is the industry leader.

Narelle Yeah.

Luke Being able to look at a picture and tell you what's in that picture, they have the best AI model for that, compared to all the other big players.

Narelle Yeah. That's it. And... Look, it's something that people with... all types of disabilities need. -

Luke Yes.

Narelle So, thanks. Look, if you like what we do on The Digital Access Show, please like, subscribe, review. I think this is Luke's third time being on the show. -

Luke Third or fourth.

Narelle Yeah.

Narelle We keep coming up with stuff. We have a chat and say, we've gotta talk about that on the show, because... cyber is digital access. Being cyber secure is also considering digital access. We'll see you next week on The Digital Access Show. Have a good week. [music playing]