**M-Enabling Australasia 2013 Conference**

**Day 1 – Mobile Technology: The great enabler: 11:15 – 12:30pm**

TERESA CORBIN: We're nearly ready. Alright, there you are, Gerry. I was looking down there! I'm thinking – oh, no, I have to wait for the interpreter!

OK, everyone. Let's get started post morning tea. I want to introduce

Gerard Goggin and I've been asking the moderators what their favourite thing to do and we decided that Gerard's favourite thing is Twitter! He's outed.

GERARD GOGGIN: Otherwise, it would sound sad with all the dinosaur apps I use. Good morning, everyone. It really feels like an historic moment. I'm really delighted to be here with a group of people who I know many of us have worked for many years, and then international colleagues also. So congratulations to all concerned, especially ACCAN and Telstra.

So we've got a panel this morning, the second panel on mobile technology, the great enabler. And we have four terrific speakers. I'll just introduce them. They'll speak for 10 minutes and then allow some time for discussion. Probably, regrettably, that will be tailed because we'll be trying to close by at least 12:45 so we have sufficient time for lunch and unwinding and networking. I want to acknowledge the traditional owners of the lands which is also the land at the University of Sydney where I work is located, the Gadigal people of the Eora nation. So let me introduce my speakers, Axel Leblois. I want to introduce Claire Tellefson from Able Australia. The biographies for speakers are here so for the sake of time, I won't tell you those. And then Greg Alchin. Greg is an independent consultant in personalised learning. And Jeremy Way. He's the general manager of Jenee Mobile. I would like to invite Claire to give her presentation. Welcome, Claire.

(APPLAUSE)

CLAIRE TELLEFSON: Good morning and thank you for the opportunity to speak today. It's great to share some of my experience with such a prestigious group.

I think there's been a lot of talk this morning already about how fantastic mobile devices are and everyone who works or lives in the disability sector would know first‑hand just how amazing they can transform people's lives. So I won't dwell on that today. I'm going to talk about some other, maybe more pragmatically and practical considerations from the work that I've been doing over the last 20 years. I might have to learn how to use this.

In 2011, ACCAN funded a report called Telecommunications for the deaf/blind community. It was a national report and consisted of a survey and the findings were that there was extremely low numbers of people with deaf/blindness accessing telecommunications. The barriers identified were mainly to do with funding and to do with training initiatives.

This year, Telstra has formed a partnership with Able Australia, the organisation that I work for, to support the training and access to mobile devices for people with deaf/blindness. It's pretty exciting. I have worked with this group for about 13 years and the ones that are onboard are just flying. But there's so many other people in the community with deaf/blindness with no access at all. But the Telstra partnership is around developing training materials that are accessible for people with deaf/blindness. Researching a whole range of mobile devices and testing their accessibility. We have a bit of a lone stock of mobile devices and are able to put them in people's hands and send them home with support workers and give them time to learn them. We train up the support workers to give them assistance with the accessibility features the devices and we're developing a peer training model which is coming along pretty good, actually.

I'm also developing some case studies of typical deaf/blind people in aged care, living independent with different combinations of deaf/blindness. And Telstra are developing an evaluation framework to measure the benefits of the program, which has also been really exciting to be involved in. Now, I don't really need to go on about this because everyone knows that once someone has access to a mobile device and can access Twitter and Facebook and blogs and all the features of social media, it is just transformational on every level. You just see them moving in to... well, not full, but pretty solid participation in all sorts of communities including the local community, the disability community the working community or whatever. It's fantastic.

I'm just conscious of time so I'm going to keep going here. Just a little bit about this community. They're not all totally deaf and totally blind. A lot of them have a whole combination of hearing loss and vision loss and often other disabilities as well. Often, their most presenting disability is that they can't communicate. Their communication is usually Auslan. If it's on a digital device, it often has to be Braille because if they have no vision or hearing, the only way to access technology is via Braille. Some of them use print. Some of them use speech. They have a large range of requirements. But from a training perspective, often, we have to get a shared language happening. Then, they may need English literacy and then finally they get to learn about digital literacy, but it's a pretty slow process and a pretty steep learning curve for many of them.

Most of the people with deaf/blindness that I work with are over 50. It's an ageing population. Often, they come from being fully sighted or hearing or from the blind community or from the deaf community and they lose their own sense. It's difficult to know how many people there are with deaf/blindness. Access puts it at 300,000 Australians. I've observed that with podcasts, audio and video, there's actually a widening gap in these guys being able to access information. Often, they're hidden. They might be in supported accommodation, living with families or in aged care. And it's usually the people that I'm working with, usually have a degenerative condition, so this is ongoing grief and adjusting to further and further vision loss or hearing loss. So within the deaf/blind community, I can tick a lot of boxes. I can tick cultural diversity. A lot of them come from non‑English speaking backgrounds and the deaf culture itself provides cultural diversity. English is not their first language. Auslan is their first language if they're primarily deaf. Their age, other disability, unemployed, socio economic disadvantaged and sometimes have other disabilities, including mental health. So my little take away from that is that if a device works for the deaf/blind community, it will probably work for everyone. So it's a really good test case to test apps and devices. The secret for accessibility for this group is to have a whole range of inputs and outputs. Inputs meaning now you interact with them. Do you speak to it or type on a QWERTY keyboard or a Braille keyboard and touch it. And outputs – how to read the screen? Through speech, through Braille or through vision? And my learnings over the last 20 years basically is that good design wins through every time. The best thing about the iPhone in particular is that it has out‑of‑the‑box accessibility and it is the first device ever that actually is able to be bought off the shelf, opened up and away it goes. It has a range of good devices which have a range of inputs, touch, vibration, speech, Braille, different keyboards and different magnification. I think out‑of‑the‑box accessibility, I think Apple is the best at the moment but it is a moving device. These devices change very quickly. But as well as that, once you can turn on the speech and once you turn on the magnification and plug in the keyboard, you also need to customise the inputs and outputs and I don't think that any of the devices are doing this very well at all. Most of it is just what you get. If they are customisable, it's often pretty tricky learning curve and a lot of people don't get that far. So in terms of what's in the future when I read about gesture recognition and all sorts of innovation, I think we're only about 10% along the way to really good design and really good accessibility for these devices, which sounds pretty tough call, but it means it's going to be pretty exciting in the future, I think. The biggest problem...

GERARD GOGGIN: Two minutes left.

CLAIRE TELLEFSON: As well as the devices is the accessible websites and apps. I think this comes down to good design. Poor designers are trying to design for a whole range of platforms, operating systems, devices and when they get to the accessibility box, they just go – look, it's too hard. We don't know how to do it. But I think if good design is there in the start, I think it will work for a whole range of people with disabilities. Responsive web design is a pretty exciting new frontier. Basically, the content is separated from the actual device and I think this is actually going to provide a lot of the solutions for us. Once you... like my little pictures there. If my device is a teapot, I pour my content on it and I can operate it. Consistency – keep it simple. And in the words of Helen Keller, "It's a terrible thing to see and have no vision." Thank you very much.

(APPLAUSE)

GERARD GOGGIN: Thank you very much, Claire, for a very interesting talk. So we've got time just for a couple of quick questions for Claire if anyone has a question. OK, no questions. That will give us some more time for discussion at the end.

I'd now like to call on Greg to give us his talk.

GREG ALCHIN: Welcome, everybody. And I would like to acknowledge the Traditional Owners and also Aboriginal elders past and present. What I'd like to do is just give you a little bit of a quick piece of my context. I am... my left eye is a prosthesis. My right eye, the vision fluctuated from 16/18 and 6/16. And I work as an independent consultant but also work with the NSW Department of Education, particularly in rural and distance education. We have 6,500 students undertaking distance education in NSW, of which nearly 80% have significant support needs. So the whole issue of disability and accessibility in distance education in particular is something that I'm very, very passionate about. Talking about our education context – because if we want to be successful life‑long learners, I have a graphic up on the screen. It's called "What happens in an Internet minute?" It was from IBM last year. I think one of the classic pieces in there was that there were 47,000 apps downloaded in the last minute. There were something like 30 hours of video uploaded in the last minute. There's a huge array of content. But as we've all discussed at different points, it's the accessibility of that content which is the issue. The other thing that's dramatically changing is education systems around the world is a movement to bring your own device. Now, for some of you who might know, I have some silver highlights in my hair! Then I went to school, the technology thin was called coloured pencils and there was this argument over coloured pencils versus lakeland and Stradler and the strengths and weaknesses of the pencils! We're now moving to a bring your own device. And you'll start to see that more and more. And there are issues and strengths for us, because as a person with a disability, I'm going to bring the device that's personalised for my needs. And as we've seen, we're getting more and more students accessing via mobile devices. And just to give you a snapshot quickly. In the last decade, there has been over a billion iTunes U-courses downloaded. There's been 25 billion songs. And there's been over 50 billion apps downloaded. And you think that the App Store has only been around for three years, that's pretty amazing. And about 900,000. The biggest issue is not – is there an app to support my learning needs? But which one and how do I critically evaluate them? And how do I evaluate them depending on what my personal learning needs are? And the issue of variability. I don't like to talk about disability, per se se. it is about diversity and variability is the norm. And it's taking on the different point. It's where we go. Look, I'm going to cater for the mythical norm and then I'm going to cater for people with disabilities. And go heads‑up! Variability is the norm. How do you cater for the extremes and the needs as part of the whole process? We do it with shoes, don't we? I can go to the Athletes Foot Store online and it will ask me whether I'm male or female. It will ask me about my arch and about my pronation. I had to learn what pronation meant! But the issue was that we could find shoes to suit my needs. The real issue is – how do we recognise and respond to that variability? So, it comes to good design, and Claire, you mentioned it. It's about good design. Now, one of my design heroes, Steve Jobs, "Design is not just what it looks like and feels like. Design is how it works." Yes, I'm a teacher, I'm a consultant, I'm an Apple distinguished educator and I'm proud of that because of the good design in the system. We're going to talk in a moment about design hardware, but also how we personalise this device. Let's have a quick look. I'm going to jump out of my presentation. I'm going to open up my settings. Why? Because as part of good design, I've got features in here. And this is why these are taking off very, very much in a range of our schools right around Bourke and Broken Hill and Coola and I can do the I've been everywhere song. I've been around the State a lot of times. But there are features on there that support the diverse range of learners. And it's will catering for variability. So whether it's vision or hearing, learning or whatever, I can find issues on there to allow me to personalise. The most important one I find first‑off is one called "speak selection". Why? Because if I open up a web page very quickly, and I just select the text and I just go "speak". I'll put it up to here.

VOICE‑OVER: Any comments in any form are welcome but the preference is that the viewers use track changes and comments within the Microsoft word document and then return the document directly to the centre director at cast.org or before."

GREG ALCHIN: OK, why is that important? I could be someone is a non‑literacy issue and a range of pieces where I need to have that feature set. It's about catering for variability. It's about good universal design and making sure that those features are in our mobile devices. And that's why I'm very passionate about how we do that here. I'm just getting reattached as we speak. Claire, you were talking about design. Again, I'm an odd bod and I've read the Apple developer guidelines, the human interface guidelines and I'm an educator. Why? Because it goes through issues that actually build engagement. But mostly and importantly, how do I verify my device? So as part of being a developer, I can go in here and I can have a look on my page and I can go – well, how do I learn about accessibility and building accessible apps and testing it within voiceover or within a range of the features to make sure that the broadest range of users can use it so that we can reach our potential. That's one of the nice features that's very much in there.

Another feature that's in there. The device has got good design and this is the thing. It's about reliability and consistency, but about the personalisation. Because as a teacher, any of you who have been a teacher say – I want something to work first time. I don't want to have a high learning curve and I want it to focus on what our real education tasks are. Not about learning the technology.

Another part, though, for us, is making sure that all that content that I spoke about at the start with the Internet minute is accessible and in an easy and defined format. It is something that we've been pushing through a range of our schools. Why? Because it's a mechanism that allows us to access our courses and to develop our courses and this is one that was developed last year. It's a simple interface. It's about the simplicity of the interface. And as a few people have spoken about, it's about how a 2‑year‑old or a 3‑year‑old can pick up the device and start flicking through the pictures. They don't have to think. And talking of that design, a wonderful little nugget of information – when voiceover was first designed, part of the design goal was to make sure that a user of voiceover could use the phone as fast as a person who did not need to use voiceover. Now, that's superb to have that sort of design criteria built in as a company.

Very quickly...

GERARD GOGGIN: Two minutes.

GREG ALCHIN: What am I doing in here? Why do I love this? It has a simple interface. It allows me to look at my posts in the course we've designed on accessible inclusive learning design environments. I can look at my notes and I can look at metadata. So I have tabs down the right‑hand side which allows me to access that. Very simply, one of the things that I can do is grab a video and I can bring it up, but at the same time, I can start typing and writing notes about the video that I'm doing. And it will then – and I'll just quit the piece here. Why, because we've got inbuilt captioning as well. And I can turn captioning features on. But I can go to my notes section and I can see with any of the videos that I've been looking at, I can see the notes that I've taken down as well as the text books so it means that it is that nice and simple and intuitive design. But the flies thing is that irrespective of what my needs are, does it work with voiceover? Yes, it does. Does it work with assistive touch? Yes, it does. Does it work with any of those inbuilt features that are part of the operating system? Yes, it does. So as a user, I personalise it to suit my needs. Claire does it for her needs. Alex does it for his needs. We all personalise it to suit our own needs. It's a socially inclusive device but it's a socially inclusive environment. And that's the key issue for us. Here in the hardware, but also the learning system, but then at the issue for us as advocates because we're all advocates, is how do we ensure that all of the resources that we access, like Terese was talking about this morning, that they are socially inclusive in their design so that we can access them when and where we need to have them accessed and personalised in the way that we do. That's the issue. It's in the good design. The hardware of the operating system, the learning system and the content. But all of those features. And it's all part of the issue. So yeah – there's some nice stuff happening on some of the other platforms. That's great. Why? Competition is good in that point because it drives innovation. And I'm excited by that. And I'd love to see more and more features come like one I've got to share quickly. Why? It's being able to in IOS 7, if you're needing to access your device by head movement, you'll be able to access your phone using the physical movement of your head or instead of even using a switching device. That's empowering and that creates learning opportunities. Thank you.

(APPLAUSE)

GERARD GOGGIN: Thank you very much. Time for a quick question if anyone has a question there. Yeah, down the back there. We might need to get a mic. Thank you very much.

UNKNOWN SPEAKER: Hello. I'm from a non‑profit organisation called Different People Able Organisation. I have an app which released about a year ago and it's called Many Months Linked (?) I'm using that because we tried to engage people with intellectual disabilities to work full time on the app. So the idea of technology, three years ago, I was taken by the touch and tap technology. And I use that because my son, which I cared for for 30 years, is autistic and I've seen more and more people getting the autistic spectrum. So for them to be able to work and to be able to use the app, which is difficult sometimes, and come up with the idea so they have photos and they can do things that are interesting like taking photos. And one things that I haven't seen a breakthrough in technology is that they can talk and record instructions. And the way I do it is engage two different kinds of people. One, that they are not smart enough to put the instructions in to it. So I use the volunteers, probably mostly ageing people. People who are retired, to check through and hopefully telling the people who have intellectual disabilities to collect it and to type it in and teach them how to type. I wonder if any technology group advances which would help anyone talk through and simply produce the text?

GERARD GOGGIN: Thank you very much. Greg, did you want to respond?

GREG ALCHIN: On technological advances on the text being a big part of it.

GERARD GOGGIN: The key question, was it about when you came to the question, was it about technological advances around text, particularly?

GREG ALCHIN: There's some new features if you're looking at the developer sites to do with IOS 7 on how you can either input the text as speech or have the text read back. Because one of the features is that it's inbuilt as part of the operating system. And for instance, I know on Siri on IOS 7, it will now have the capacity for it to be trained to recognise your voice and to recognise the words that you are saying at times. So it can pick up different inflections and variations, which would enable you to put that text in. It's a matter of... it's what's called the APIs. It's working with the accessibility features. What we might do is have a little chat after the session at lunch and I could put you in touch with some of the accessibility developers.

GERARD GOGGIN: Great, thank you very much. OK, now our third speaker is Jeremy. I'd like to invite Jeremy to come and give his presentation. Welcome, Jeremy.

JEREMY WAY: Good morning, everyone. My name is Jeremy Way. I'm the general manager of a new telco start‑up called Jenee Mobile. Our tagline is we like to think big. We started a not for profit telco specifically to meet the needs of anyone who requires additional levels of support. Now, that could be people who are ageing. It could be people living with disabilities. It could be anyone who requires an additional level of support. That was our big idea and that's caused me a world of hurt for the last three years as we've tried to get this thing up and running. So today, I would really like to talk to you not so much about mobile technology is an enabler. I think that that's been covered quite amply through this morning's sessions. I would rather like to talk to you how a significant group of our society, a group that is highly representative of people living with disabilities and people who are older have been and continue to be denied access to mobile technology. And I want to talk about how this lack of access to simple‑to‑use supported, and that's the key phrase here, supported mobile technology, not only prevents people from engaging with some of the modern and exciting technical toys, like Greg demonstrated today. But this also acts as a barrier to becoming active citizens and participants in today's modern community. This group of people is what I have said is the digitally disenfranchised. So I should probably remember to use the slides.

Now, some of you here today may well disagree with this premise. After all, technology and particularly mobile technology is everywhere. It is ubiquitous. The mobile technologies of the group some may argue may point to greater technology options and universal design options. That's exactly Greg's point. And to a certain degree, this is correct. Accessibility must be front and centre in any technical design. In other words, technology or well designed technology is the answer to accessibility. Well, in our experience, that's not always the case. And how do we know this? Well, because we got it wrong. We got it wrong a lot. We went down this path. We created smartphone apps, and apologies to Greg, we're an Android shop!

GREG ALCHIN: It's all about variability and diversity!

JEREMY WAY: It sure is, my friend. We created smartphone apps that we thought ticked the boxes. They were accessible, they were easy to use. But we found when we put them in people's hands, we missed the mark. And we didn't miss it by a little way, we missed it by a long way. People simply did not want to use or engage with the technology. So it became obvious that a technical solution did not really address this problem. It's not as simple as building a more and more accessible mouse trap. You must address the very heart of the problem. If technology is accessible, then why aren't people accessing this technology? That's a really difficult question to answer. To answer that question, it involves investigating why people won't or can't engage with mobile technology and this requires deep investigation of assumptions. So, one of the most frequently heard reasons used for explaining a lack of engagement for this group of people is simply that it won't work for my son or my daughter or my mother or my father. We hear that all the time. Underlying these comments are assumptions that are based around cost, complexity and capability. Put simply – technology is costly, it's complex and this group of people lack the capability to use it. These assumptions are usually unspoken and they are based upon people's real life experiences. And they are well intentioned. But they are inherently limiting. And each of these assumptions must be addressed if they are to be broken. If the limitations are to be broken and people are to access technology. Let me briefly address these assumptions.

Firstly – cost. Technology is expensive. Well, and this is usually addressed at two levels. Firstly there's the hardware component, as it were. Technology used to be expensive. But when you can get a smartphone these days – unfortunately not an Apple smartphone! But you can get a smartphone these days for under $100. This is no longer the case. So the second aspect of cost is about ongoing costs. And in the mobile space, this is based around the issue of complexity, of mobile phone contracts. Many people have been burnt in this sector by telcos, by confusing contracts. There is an assumption that people have an incapacity to understand. I work in the space and I don't understand half the contracts. But this should not be a reason that people can not engage with mobile technology. What is actually needed here is informed choice. We need to make it simpler. Easier to understand! This leads me to the second of the assumptions – complexity. Technology is inherently complex. This used to be so. Absolutely. But as Greg as just mentioned, companies like Apple and Samsung have invested billions of dollars, hundreds of thousands of man hours, development hours, in developing intuitive user interfaces that are truly a beautiful thing to behold. But the issue is not about design alone. Technology is scary. Think back to the first time that you laid hands on a computer or a smartphone. It was a scary thing. What happens if I break it? If I don't understand it, I might break it if I touch it. These are internal limitations that an end‑user places upon themselves and this creates a barrier to engaging with technology. These internal limitations can also be reinforced by external stake holders who believe that technology is too complex for their person and as such, deny the person the opportunity to use it and to experience the reality that in all likelihood, if they touch it, they won't break it. I must also add that there is another issue here and we see it a lot, particularly in the disability, where the external stake holders themselves have a low affinity to technology, and so they find technology intimidating themselves. And in this case, it is highly unlikely that they will become advocates to are their person that they support to adopt complex technology that they don't understand themselves. This is a limiting factor as well. So this leads me to my next assumption and this is that people lack capability to use the technology. This is often a phrase in terms of – that will never work for my father. My father is forgetful or my son is obsessive or my daughter can't read, or whatever it is. But what is really being said is here not that the person can not use the technology. But rather, the technology is not capable of meeting the needs of the end‑user. What is required is technology that is as accessible as possible but one that recognises that people are individuals with unique needs, wishes and aspirations. And this is exactly Greg's point. The technical solution must be personalised to meet the individual needs. It must be flexible enough to match the individual requirements and capabilities of the end‑user.

In short, the technology solution must offer or be wrapped around a framework of simplicity and service. This is what we discovered as an organisation of people living the lives of their choosing in the community for more than 20 years. And that is why we started Jenee Mobile. We didn't start from the technology frame of reference. We started from the belief that people required the human elements that could be delivered through a technological solution.

So we started with service. We recognise that people living with disabilities or those who are becoming increasingly frail require support in differing degrees. This support is not required all the time. Only when it is needed. So we created our Jenee help centre. A call centre which is locally based, just down the road in Parramatta, staffed by people who are specifically trained to provide high levels of support to people that may require it, whether they are becoming increasingly frail or are living with a disability. Our help centre is there whenever it is needed. If you've had a bad day, call us. If you've had a good day, call us. If you're feeling lonely, call us. We're there for you. Or, if like just the other day, we had a person who phoned us who had just woken up. She was having problems breathing because she was having an asthma attack. So we phoned an ambulance for her. We waited on the line with her, reassured her until the ambulance arrived and then smoke to the ambos when they arrived. That's what we're there for. Unlike other call centres, we actually want to talk to you. I know, this is unusual in the telco space! And because we are the telco, we have made all of our calls to our help centre made from a Jenee Mobile connection free.

This is how we support people to live the lives of their choosing in their own communities. I'll just finish off. I have a couple of other points to do.

Simplicity. We believe that technology must be simple. We've developed a new technology that can be customised to meet the individual needs of the end users. We use big icons. Big icons are simple and friendly. The screens, you can call our help centre with the touch of a button. We make no assumptions about people's capability. But rather, we cater to the full spectrum of users from users with little or no literacy or numeracy skills through to people requiring alternate access methods or people who are technically savvy but just want the added reassurance of access to a help centre. Finally, we focussed upon security. In our experience, many vulnerable people, including the elderly and those living with disabilities, have run in to significant financial problems due to a lack of understanding of often complex and at times deliberately misleading contracts. This is why we started Jenee Mobile. We've established ourselves as a not‑for‑profit telco. We have specifically designed our service to meet the needs of the sector. All the funds we raise from this go not back to shareholders but go back in to providing our core purpose – supporting people who live with disabilities to live independently in the community. We offer simple, competitive plans. We aim wherever possible to prevent bill shock by providing as much transparency as we can. We provide 4,000 free minutes to families and friends to call each other. We also provide a GPS tracking solution for people who may be lost or confused about where they are. We add peace of mind, that's part of what we do. This is not, although it may sound like it, an unashamed pitch for what we do. We have a table out there, I encourage you all to go and touch and feel what we do. Let me just finish with this... mobile technology can and should be an enabler. It can be empowering, but a holistic approach must be woven through the human aspect of what we do. Technology must focus upon simplicity, security and above all else, service. And that is when it will truly become empowering. Thank you.

(APPLAUSE)

GERARD GOGGIN: Thanks very much, Jeremy, for your presentation. For purposes of time, I hope you don't mind if we go straight to our fourth panellist, Axel. People can ask questions after then. Axel, in a response co-creation with the panel, has said he'd be happy to give some initial feedback to panellists, then we can open it up to the discussion. Axel?

AXEL LEBLOIS: First of all, thank you for all those terrific presentations. We saw a wide variety of situations where technology was actually being distributed and supportive for people with disabilities, for extreme cases like the deaf/blind community to the general population and education sector. What I would like to briefly mention in terms of initial feedback to the discussion today – there are issues that are kind of complex all around the world on how to actually promote digital inclusion and technology adoption by persons with disabilities in seniors. I see three areas where we can probably have a discussion. One is there is a very delicate frontier between universally designed devices and mainstream assistive technologies, and the type of support it requires. You go on the spectrum of solutions and you see from very little to a lot to the point where the assistive technology support ecosystem is really going to be the biggest cost, other than the technology itself. So that's number one.

Number two – there is an issue of distribution which affects everyone. Number three – there is a special issue with ageing users. Let me go very quickly through three things. For the assistive technology sector, most countries have assistive technology professionals in education, in rehabilitation centres, and in the workplace, and sometimes also in community centres. Those professionals traditionally have been used to assemble things together, to offer complete solutions. Today, there are a lot of tricky situations. Number one – kids show up with technology – bring their own device. Number two – a lot of educators are saying now, "Well, if they are to have the technology in their hands at home and they come to school with it, maybe the best thing to do, as you mentioned earlier, is to teach them from the earliest possible age how to self‑accommodate." Because once they know how to self‑accommodate, that would be a skill they can hold for their whole life in all situations. There is a whole school of thinking now that says, "Don't bother even trying to have all those tests and this and that. Just let the kids define themselves what they need. Once they know how to do that, it will be a fantastic asset for the rest of their life." However, by the same token, there are many situations where assistive technology professionals need to offer a complete solution. Today, if you look at, for instance, the (inaudible), technically you cannot download that from the App Store. If you are an IT professional, how do you deal with it? Because you have to have the user download themselves, their application or device. You may do it, but I see in many places IT professionals aren't ready to do it. IT centres – for instance, in the US, they don't want to take the responsibility for many different reasons. To the extent that distribution system today is set in stone, I think there is a little bit of a twist. I would love to hear your comment on that. Also, I see that, in many countries, the final thing for us – we had a question on this topic earlier today – you can actually, for instance, in Medicare in the US, which is medical insurance, would pay for a $5,000 device that's based on old technology, but would not cover the cost of buying an iPad, which is the best application for cost. The systems for funding assistive technology are way, way behind. That's a big issue. I've seen countries like in Italy – they do pay for iPads now with applications on it, but then you get to the point where, "OK, how do you get the App Store thing?" It's complicated. I will let you answer later on. The final point is the ageing of the population, which you have addressed brilliantly. I think one of the issues here is that there is a cognitive obstacle which becomes huge. You can't compete with it. Second of it, they have everything we need. The person may be 80 years old, have a certain set of issues, and two years later the situation is different. Five years later, it's much more different. I saw it so many times. How do you address it as a particular situation evolving? Because at some point in time, the user will disconnect." I just can't deal with it anymore. That's it. I'm done with it." Those were my insular reactions to your presentation. It's the continuum of support, the level of support, who pays for it, how is it managed, how can it be part of social protection systems?

GERARD GOGGIN: Thank you very much indeed for that, Axel, for that incisive response. I might need to get the microphones turned on? Great. Thank you very much for that incisive commentary. I might just get each of the panellists to respond, maybe in order – Claire, Greg and Jeremy, if you wanted to respond in turn. Claire?

CLAIRE TELLEFSON: Yes, the whole area of how to fund and how to assess assistive technology for people is an absolute minefield, as you've pointed out. I don't know what the solutions are, really. I think I'm just really fortunate that I have a very small group, and we can work intensively with them over a fairly long period of time. People with disabilities, particularly old people, are really resistant to embrace it. They think it's just too much work or too hard. You really have to encourage them to take it up. And they do need a lot of support with training. They need support with purchasing. They need ongoing support to keep adjusting. It's a really big minefield.

GERARD GOGGIN: Thank you very much. Greg?

GREG ALCHIN: I was going to say, training and support is important. It's not just the total cost of the package‑ you feed to bring that in as part of the pricing of support. Just in relation to the issue there of the apps – there have been some issues with the way that the App Store currently works. I know that, with IOS 7, which is just about due, as an educational institution, I could now own the apps and quickly gift them to the schools or to the providers, so the same could happen for an AT professional, where they can gift those apps to the users, and then return those apps after a period of time if they want to purchase their own or they're finished with that service. Yes, there have been problems in the past. But the testing that we I've seen happen – because I'm not actually part of Apple ‑

(LAUGHTER)

GREG ALCHIN: I'm passionate about it! I'm loud and proud! As a user. But that certainly has changed. I think, just in relation to assessment – particularly AT, very quickly – Joy Zeballa's work on the set framework, which is widely used in the AT field, is a great framework – that's the SETT framework. It's well worth having a look. It can apply not only in education, but in aged services as well.

GERARD GOGGIN: Thanks, Greg. Jeremy, brief comment?

JEREMY WAY: The issue of ongoing funding and who pays for what and the level of support that is needed to support technology adoption is a huge issue. What we found, particularly in the disability sector, particularly as we move down a person‑centred approach to individualise funding, it is becoming increasingly easier to have the hardware funded by people's support packages, by government. But what will not be funded is the ongoing elements of it. So a mobile connection, for example – I can support a person who may have multiple sclerosis, for example, with a device, and I can provide that person with as much hardware as they need, but I can't provide them with a mobile connection which is, in effect, personalised support via another mechanism, via another channel, via our help centre, through these funding packages. Because it is seen just as a mobile phone. And therefore, mobile‑phone connections are a cost that people are deemed to be responsible for themselves. So there does need to be a paradigm shift in terms of funding about how these things are funded, about how support is changing in the new environment, and how that will be supported from a governmental perspective as well. In terms of the ongoing support that's necessary to really embed technology, as I said, it's not just about simplicity and security, but you do need to have the support networks around people, whether they be families or service providers who know the person best who can tailor the technology to the needs of the person. What we have found is, if you do not have the deep engagement of those people, the broader support networks, then the technology fails. The adoption rate is not there. People become disengaged. It's too difficult for them to deal with. It's really critical to weave in the broader support networks.

GERARD GOGGIN: Thank you very much. I'm going to move here to take some questions. We've probably got about 7 or eight minutes, Teresa, for some questions. That's been a really rich discussion and conversation. I'd invite you all to join in, if anyone has questions or comments. Fire away. Just in the – we've got people with microphones – thanks very much. There's someone in the middle of the row there. Please go ahead.

UNKNOWN SPEAKER: Hi. I've got a couple of really quick points. One of them is kind of touching on what Claire and Greg were talking about before in terms of app development and app accessibility. One of the fantastic things is that it's so easy for someone who has a disability to be able to purchase an app for mobile devices. But I guess one of the big issues is that you don't necessarily know that an app is accessible until you actually have it, or unless other people tell you that it is accessible. I think that's something that perhaps we need to work on. The issue with that is that probably the legislation in individual countries is difficult to change, but I think that has to come from organisations like Apple.

That's one point. The other thing I wanted to quickly touch on was that I think the people who are working, and working age, with disabilities who are using mobile devices – I think there's a kind of need for us to ensure that our devices are not necessarily seen as toys, that they're actually seen as business machines or business devices. You see so many people now using them as note‑taking devices, in meetings or using them to run presentations and different things like that. I guess they're not really questions, just kind of points to raise from what's already been discussed. That's it, really.

GERARD GOGGIN: Thank you very much. Both really good points. I might take three questions in a row now, given the time. Someone here has a question.

UNKNOWN SPEAKER: Hi. Susan Thompson from Vision Australia. One of the things I wanted some comment on is, in relation to ongoing costs, I'm starting to see creeping in, especially with some of the specialist providers, that you can get applications such as a GPS application provided that you have constant access to the internet and that you pay a fee every year for that. I think that is going to be an ongoing barrier.

GERARD GOGGIN: Thank you very much. We'll see if there's a couple more questions. One at the back? We'll keep the questions quite brief, please.

UNKNOWN SPEAKER: A point of question to Greg. I think you know a lot about numbers. Has the word been collecting datas – for instance, with the intellectual disability people – how do we – what percentage of the people actually work? I think we're getting to a very dark area where, when you've got intelligent disability, nobody will hire you, for reasons being – it's difficult to control your behaviour and difficult to get productivity up, and so on. I just wanted to try to actually release an app. You made a point that we only hire people with intellectual disability to actually do data entry, and nobody else is going to touch it. I wonder whether – does everybody notice that actually providing work is the biggest thing that they require to actually manage themselves to be able to actually live independently? We had a boy who was ‑

GERARD GOGGIN: I'm sorry, I might have to get you to restate the question quickly, because we're out of time. Is the question about...

UNKNOWN SPEAKER: My question is whether there are statistics available to engage people with intellectual disabilities.

GERARD GOGGIN: Thank you very much. I'll see if there was a third question, if anyone had an additional question at this stage? We'll work through the questions as a block, if that's OK.

UNKNOWN SPEAKER: This is a comment for Axel. Thank you for acknowledging older people, and the challenges around technology. One of the things I think we need to think about is a 95‑year‑old old person is very different to someone who's 60 or 65, and thinking about the design and engaging people in that process around how you develop apps and make it accessible to older people.

GERARD GOGGIN: Thank you. The first question was from Susan Thomas about cost – the question was about the number of extra components that get added to the ecosystem of devices.

GREG ALCHIN: I was going to say that is an issue that you're starting to see in a whole range of people – it's that service cost that they're building in and trying to tie you in on a regular basis. Yeah, it's sneaky.

JEREMY WAY: Absolutely. Ongoing cost is a huge issue. We often talk in Jeenee Mobile about the disability tax. Why does it cost so much to do something that is reasonably simple to do? Why do devices – why does a wheelchair cost $25,000 or $30,000? Why does it cost the same as a mid‑level sedan? There's significantly less folded metal in it. Why does a plastic switch cost $90? These are the sort of things that I think people talk about a lack of market and market size and all of that, but really, people charge that because they can charge it, and they can get away with it. I think it's a real issue for the sector. I think the sector needs to support organisations or vote with its feet.

GREG ALCHIN: Hear, hear.

JEREMY WAY: I think there are, particularly in the app world, it is a big, bad world out there. And there are some really, really good apps, and there are some really, really dodgy apps, and you can't tell which is which going in. This is an issue for all of the app stores, I think. They all go down the path of self‑regulation, but I think what's needed in this sector is maybe some sort of unified social network that actually vets and recommends applications that work for people.

GREG ALCHIN: If I can add on one piece – one of the things on the education section of the iTunes App Store is a process where the apps are curated. Yes, there is the star rating, but one of the things that Apple does – I'm on the special-ed duration group. There's a group of teachers from around Australia, and we've gone through and said, "Here are some recommended apps. Here are the reasons why." They've done it for a whole range of disability areas, but also a broad spectrum of education. So the nice process there is that there is that industry validation from either the teachers or the special‑ed experts on that process, which has been really powerful.

JEREMY WAY: That's really needed and, that's something that I will say Apple is ahead of the Android space, the Android play store is really a free‑for‑all in terms of rating of applications and self‑rating of applications.

GERARD GOGGIN: Thanks very much. Responses to the second question about statistics and people with disability in the workforce?

GREG ALCHIN: I think you'll find those with the Federal Government through education and employment. There are those stats available. It's a matter of getting onto the appropriate Government sections. I'm not sure, because I know the Government departments keep changing names, like we do in state. It's the exact name. To deal with education employment – that is now a Federal Government responsibility. There are the stats there, though. DEW A, that's it. I had a grey‑hair moment.

GERARD GOGGIN: To chip in here, I think Graeme Hugo's point was interesting in terms of – is there someone where all the various statistics and pictures are brought together in Australia? It sounds like there may not be, which would be something good to address. The third comment or question was around the diversity of the older, the aged or seniors cohort. Different ways to say this. Does anyone have a comment – particularly you, Axel?

AXEL LEBLOIS: First of all, I would like to qualify my response because I'm not an expert in dealing with persons with disabilities or seniors from an assistive technology standpoint, but I can see from exposure to many different situations that a 95‑year‑old could look like a 60‑year‑old, and a 60‑year‑old could look like a 95‑year‑old.

(LAUGHTER)

The reality is that each person is a single case, a single set of needs. Some of the issues that happen with ageing for people to deal with is they gradually get much more disabilities, in fact. I would like to just give you – if you give a 25‑year‑old or 30‑year‑old person who just became (inaudible) an iPhone a week later, that person would be on social networks. Now, if you are an ageing person, there is just no way that this is going to happen, obviously.

From maybe a long‑term perspective, I would say that somehow, there is a whole area which is not yet explored which is how to understand the behaviour of people with mobile devices by seeing what function of the phone they are not using anymore, or what issues are occurring. There are particular solutions within that space so that you can actually progressively automate certain patterns of behaviours. You can identify particular patterns of identify, or perhaps solutions or suggestions for an upgrade or change of phone configuration. Last week, I was on vacation. A member of my family, an 84‑year‑old, came. He's a professor in chemistry as a past activity. He continues to write books today. He said, "I hear you were dealing with accessibility. I have had so much difficulty with my smartphone." He pulled it out and said, "It does not ring."

(LAUGHTER)

"My phone does not ring. It's an embarrassment. People call me." Then for some reason, I can't send text messages." Anyway, we sat down. I had to go to the internet to find a user manual, actually. I fixed it. But he had stayed with that phone for more than a year without being able to sort those issues. He's a very smart person.

JEREMY WAY: That's the necessity of the broader support networks around people. Technology, per se, is scary and intimidating for people. And particular as people become more and more frail or disengaged with the technology, it's about making it, as I said earlier, simple – personalised to the needs of the individual. And the personalisation has to come from the broader support networks around that person. They can't do it themselves.

GREG ALCHIN: That's right. I think it's about picking up on what are those personal support networks. Axel, as you said, the 65‑year‑old, the 95‑year‑old – we can make assumptions about people. That's the issue – the assumptions that we make. We need to deal with each case, each person, on a personalised basis, and as a person. Person first, not an aged person or disabled person or blind person or whatever – it's about being a person first, and building that support.

(APPLAUSE)

GERARD GOGGIN: I think that's the appropriate place to close the panel. My thanks very much to the four panellists, and to yourselves as well for your interaction and patience. Bring on lunch, I think, is the next. We'll be back at 1:30.

(APPLAUSE)