



THIS EDITION:

The Great Enabler?

Eye-phone: How mobile apps changed my life

Cutting edge: Specialist gadgets revolutionising disabled access

Game on: Meet the geeks helping gamers play on

ACCAN: our story

ACCAN is the peak organisation representing all consumers on communications issues including telecommunications, broadband and emerging new services. Our mission is to ensure the availability, accessibility and affordability of communications services for all Australians.

Contact us:

Phone: 02 9288 4000

TTY: 02 9281 5322

Web: accan.org.au

Twitter: @ACCAN_AU

Email: info@accan.org.au

Magazine contributors

Editor: Asher Moses

Deputy Editor: Mark Callender

Contributors: Wayne Hawkins,
Katerina Pavlidis

Design: Magnesium Media
www.magnesiummedia.com.au

Cover: © Shutterstock.com



Our CEO: Teresa Corbin

Like many consumers, I rely on my mobile gadgets in almost every aspect of my life. It's easy to take for granted these personal assistants in our pockets that not so long ago were the stuff of science fiction. Unfortunately, these digital companions are not always accessible to those who could benefit from them the most, such as people with disability and older consumers. Far from "The Great Enabler", for many this revolutionary technology is the great isolator, as too few apps and websites are made accessible. People who are vision impaired in particular often have to guess their way around sites and apps simply due to basic design oversights.

This inequity is why we are partnering with Telstra to hold the M-Enabling Australasia 2013 conference in August – we want the event and this magazine to raise awareness so that people with disability are fully included in the digital revolution.

Our feature story will give you a

fascinating personal insight into how ACCAN's Wayne Hawkins has dealt with technology since becoming blind seven years ago and some of the apps that have changed his life (page 8).

And despite the fact that so many apps and websites are still inaccessible, there are some fantastic technologies currently being developed for people with disability, such as a new gadget by Orcam, which purports to give people who are blind the ability to see (pages 4-5). There's also an inspiring story on Caleb Kraft, a tech "tinkerer" who has taken it upon himself to make affordable, customised controllers for gamers with disability (page 6).

As always, if you have any comments, suggestions or feedback, please email ceo@accan.org.au or call me on 02 9288 4000.

Warm regards,
Teresa Corbin
CEO
ACCAN

Contents



FEATURE

Wayne's world: how apps changed my life

A personal insight into navigating the app universe after suddenly becoming blind



NEWS **4**

New eyes for the blind and a GPS gadget to “watch” over grandma

SPOTLIGHT **6**

Master of his Kraft

Caleb Kraft is helping disabled gamers play on

INTERVIEW **7**

The irony of access

Graeme Innes knows how to fix the accessibility problem

TIPS **11**

Accessibility shootout: iOS vs Android

Who will be the accessibility winner?

POLICY **12**

Deaf community calling the shots

Finally...new communications services for the Deaf

GRANTS **13**

Death and the internet

Will your family be able to access your digital assets after you die?

MEMBERS **14**

It's our ABC too

Blind Citizen's Australia take the fight to the ABC and federal government



Glasses provide new eyes to blind

Israeli startup Orcam is generating global buzz over its technology to help the visually impaired. The small gadget, containing a camera and earpiece, clips on to a pair of glasses and tells the wearer what's in front of them. It can read the text of a book or menu, identify products on supermarket shelves and

even announce the names of friends and family in a room. The company said it had pre-sold "several hundred units" following their introduction on June 4 at a price of \$US2,500 each, with the first 100 units shipping in September and the remainder expected to be shipped by the end of 2013.



Watching over grandma

Two Sydney brothers have developed the SOS Mobile Watch designed specifically for elderly users. Equipped with a SIM card and GPS functionality, the watch features a big red button that can be pushed by the wearer in the event of an emergency. The watch dials the numbers of various designated carers until someone answers. Carers can then speak directly to the wearer and track them via GPS on a map. The watch, designed to give more independence to seniors, costs \$399 outright or \$39 a month.

Apple ups ante on accessibility

Apple's smartphone and tablet software already has extensive built-in accessibility options (see "Tips" on page 11), but the next version, iOS 7, due out in Spring, is expected to enhance these further by allowing users to control their devices using head movements, ideal for quadriplegic users. Specific movements can be mapped to functions on the phone such as a left head roll to activate a click or a right head movement to activate Siri.

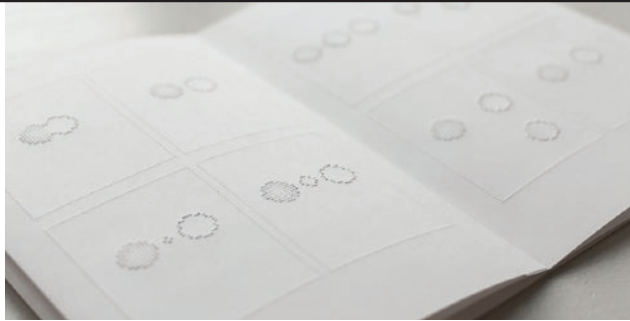
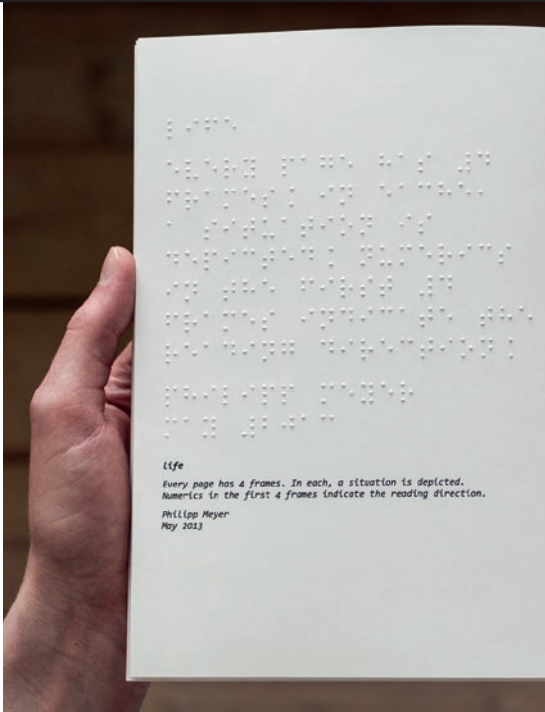


GPS for blind golfers

Blind golfers have traditionally had to rely heavily on their caddy for essential information, but a new product called GolfBuddyVoice+ is greatly increasing their independence. With information about over 36,000 golf courses around the world, the device automatically recognises where a golfer is playing, what hole they are on and how far from the green they are from the golfers' own angle of approach. The device, which can also give highly accurate distance readings, sells in Australia for \$220.



© Shawn Carpenter



Life: a tactile comic for the blind

During his interaction design studies, Philipp Meyer decided to take on a novel but powerful project – building a tactile comic book for people who are blind. The results, published on his website (hallo.pm/life), have been extremely well received and in May, Meyer began offering them for sale through his website as well as making versions for libraries and schools for the blind. He said he would never forget the day Braille proofreader Michael read the comic for the first time, experiencing a completely new medium. “On that day I realised that it is possible to tell a story – without ink, text or sound – that comes to life through imagination,” he said.

Winners and losers in copyright battle

Less than 1% of the world’s books are currently made accessible to the blind community. Fortunately, this meagre number looks set to change following the agreement of a new global copyright treaty at the World Intellectual Property Organisation (WIPO) conference held in June in Marrakech. The treaty makes it possible, for the first time, to make copyrighted material accessible to the blind community without having to ask permission of the copyright holder and to share those works across borders. Currently, if you live in the US and try to send an accessible audio book to Australia, you would be in breach of copyright law. This treaty is seen as crucial for the millions in the developing world who have basically no access to these works. Musician Stevie Wonder, who has been blind since just after birth and campaigned for the changes, said after the deal that “my faith in humanity has



been renewed”. Individual member states must now ratify the treaty and implement the provisions.

Conversely, rightsholders, who strongly resisted the WIPO treaty, have separately taken action against Swedish subtitle translation site

Undertexter. The service provided fan-made translations of TV and film dialogue that could be overlaid as captions on the on-screen content.

Swedish police, who raided two properties used by the service, said it was a breach of copyright law to make transcripts of the works without the permission of the copyright holders. Critics of the move said the industry had failed to provide adequate subtitles. “These sites exist because they offer a service to the deaf and foreign language audience that’s often lacking through legal channels,” Ernesto van der Sar, editor of the Torrentfreak news site, told the BBC.



Braille smartphone

Indian designer Sumit Dagar has developed a prototype of a Braille-enabled smartphone that he says could be on the market by the end of this year. The touchscreen is able to elevate and depress content, transforming the data into touchable patterns. This would allow a visually-impaired person to conduct a video chat with someone and be able to track their facial expressions. “Technology is giving everyone superpowers, but many blind people are not able to tap into these cool new features, and the technology is making them even more disabled,” said Dagar. “So I decided to do something that could reach out to this population.”



Caleb Kraft

Master of his **Kraft**

Caleb Kraft got angry, then he decided to do something about it. Earlier this year the 32-year-old professional electronics tinkerer met Thomas, 10, who has muscular dystrophy and feared that he would not be able to continue playing his favourite video games, such as Minecraft, as the degenerative condition worsened. Kraft set about building Thomas a video game controller that would allow him to continue enjoying his hobby but was immediately struck by the lack of affordable products that could be customised to suit people with different disabilities. "There is a huge gap between need and what's there to fill that need and I think that big gap can be filled by tinkerers like myself," said Kraft. "You have commercial products out there that are not individualised, they're extremely expensive ... we're talking \$1,000 for something that a tinkerer like myself could make for \$100."



The Able Gamers Foundation (www.ablegamers.com), which petitions gaming companies to make their products more accessible and raises money to help disabled gamers, estimates that in the US alone there are 33 million people with disability who play games.

Kraft said that while many physical disabilities left people unable to hold a standard game controller, a few simple modifications like relocating the joystick or some buttons was enough to get someone gaming again. Indeed, individuals like gadget guru Ben Heck have for some time offered their

services (<http://benheck.com/for-sale>) to customise Xbox controllers to suit people with disability.

On June 20 Kraft launched The Controller Project (www.thecontrollerproject.com), an online community to connect techie tinkerers with people with disability. Dozens of people signed up within just a few weeks from around the world, including Australia. One request sought to modify the Nintendo Wii remotes so it could be used with one hand, while another project seeks to replicate Nintendo DS buttons on a flat board for a gamer who cannot hold the controller in their hands. Kraft said his site's message board had already welcomed requests from gamers with conditions ranging from Tourette's syndrome to cerebral palsy to spinal muscular atrophy.

Kraft argues games are the great leveller for people with disability. "Whether it's a physical or cognitive disability ... the ability to login to a game and be the same as everybody else is a more important medicine than people think."

The irony of **access**

ACCAN speaks to
Disability Discrimination
Commissioner Graeme Innes

For disability discrimination commissioner Graeme Innes, smartphones and other wonders brought about by technological progress come as a “double-edged sword”. Blind since birth, he admits he couldn’t do his job effectively without access to innovations such as the screen reader on his iPhone, but at the same time he regularly encounters situations where technology and content are completely inaccessible.

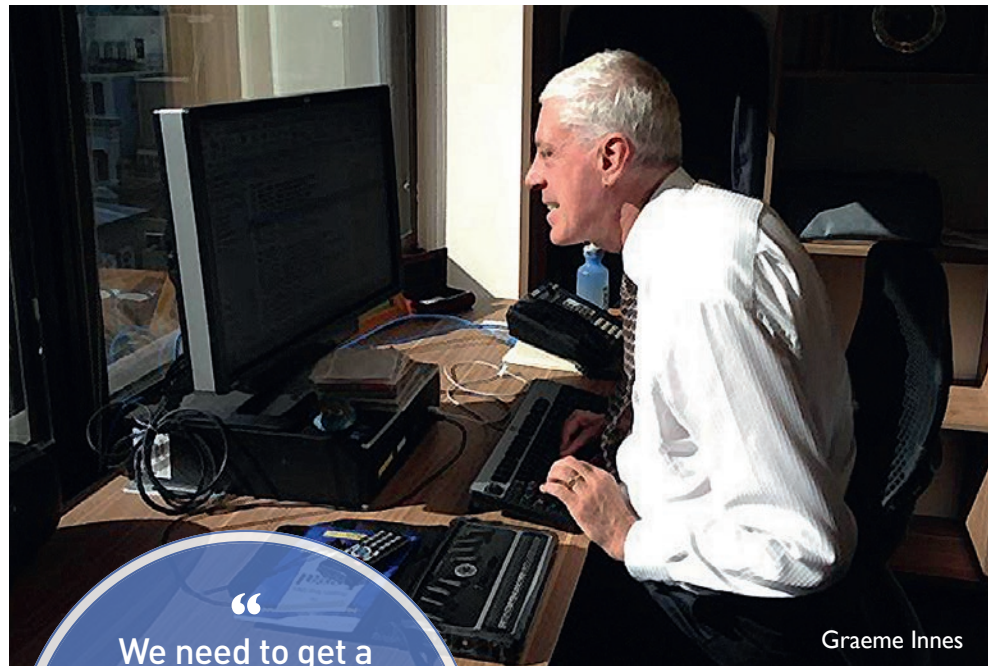
“The irony about access ... is this new road or highway opens up and people put up roadblocks along the way by ... not considering everyone’s needs when things were designed or built,” says Innes.

The internet may be known as the “information super-highway” but for many like Innes simply getting a car on the road, so to speak, can be a challenge in itself. Many popular apps and websites, for instance, are not accessible to people with disability.

Innes, 57, describes access to material as “the major challenge that I’ve had all through my life”.

While he was studying law in the 1970s – before computers, the internet or web-based legal databases – volunteers read law books on reel-to-reel tapes or cassettes so Innes could keep up with the readings. Many others manually transcribed books into Braille, but even then Innes was prevented from accessing the full suite of study material. He still managed to complete his degree in four years.

Innes believes many of the accessibility problems faced by people with disability today are due to negligence rather than intentional.



Graeme Innes

“
We need to get a
universal design
approach where society
is designing for everyone
not just ... designing
for yourself.
”

Some of his recent accessibility pet peeves include:

- ▶ Qantas disabling the built-in accessibility features on iPads handed out to passengers as in-flight entertainment systems.
- ▶ CAPTCHA tests on websites which verify users are humans and not bots by making them type in barely legible or obscured strings of letters and numbers.
- ▶ When buttons on websites and apps are not labelled in a way that can be read by screen readers.
- ▶ EFTPOS machines with no speech output so visually impaired users must trust the merchant.

Innes said not only were accessibility oversights “annoying” and in some instances “appalling”, but they were also “not even smart” because developers were locking out a chunk of the market.

“We need to get a universal design approach where society is designing for everyone not just ... designing for yourself,” he says.

Although he does not have formal enforcement powers, Innes has taken an activist approach when it comes to accessibility issues, such as a recent case where he successfully lobbied the ABC to upgrade its app to make it more accessible.

He argues disability is “the untold story of the NBN” as the increased bandwidth could be harnessed to improve the lives of many, including Deaf people who could conduct high quality video chats in Auslan and people with a mobile disability who could choose to telework from home much more easily.

Wayne's world:

how apps changed my life

By Wayne Hawkins,
ACCAN disability
policy advisor

About seven years ago, at the age of 47, my world suddenly faded to black as a result of retinitis pigmentosa. The real world may be difficult to navigate without vision, but cyberspace and the app universe can seem virtually impenetrable to a blind person.

Almost immediately, I found that much of the technology I routinely used day-to-day was no longer usable. My mobile phone went from being a way to connect with friends, family and colleagues anywhere, anytime to a pocket “pokie” – every phone call was a game of chance. But instead of winning a stash of gold coins, winning meant actually connecting with the person I wanted to speak to. Without being able to read my contact list, it literally became a shot in the dark trying to count through my contacts alphabetically. I quickly learned how to discreetly tell someone that they were not really the person I wanted to speak to, but other times I just had to have a conversation about nothing before quickly hanging up and spinning the wheel again, hoping for the best. When I heard about new software that could turn the text on my mobile phone screen to speech, I was really excited, until I realised that the software only worked on certain handsets and cost an additional \$300. Suddenly I needed to fork out \$1,000 to have the same

access that my \$50 mobile phone had given me as a sighted person.

This may be difficult to empathise with for sighted people, but has left me, at times, feeling incredibly isolated and helpless.

Thankfully, in the intervening years, the smartphone revolution has taken hold and people like me can buy handsets that come with useful accessibility features right out of the box. There are thousands of apps at your disposal including many that can make a real difference in the lives of people with disability.

However, my journey down the information super highway is still travelled with much trepidation. While I know I couldn't possibly live the life I do today without all the great accessible technology available to me, I'm reluctant to embrace new advances in technology because much of it is not accessible.

The majority of digital technology both historically and today, is not easily navigated for people with disability. Every day hundreds of new apps hit the market, most of which are not accessible for people like me. A classic example is my experience with e-books. I get most of the books I read from an online audio book club. Late in 2010, I downloaded Patti Smith's new book, *Just Kids*, without realising it was only offered in Swedish. The book was not



“
There are thousands
of apps at your disposal
including many that can
make a real difference
in the lives of people
with disability.
”

available as an English audio book. Not to be thwarted, I went to Amazon and downloaded the Kindle software for my PC and bought the book not realising that Kindle was inaccessible with my screen reading software. Unwilling to admit defeat I then went to Barnes and Noble and downloaded their e-book software and bought my 3rd copy of the book. You guessed it – inaccessible. When the English audio book was finally released the book club offered to provide it free of charge, but almost unbelievably, because I live in Australia I wasn't able to download the free book due to copyright issues. The good news is that nothing ever stays constant in the technology industry. In May 2013 Amazon finally released an accessible Kindle app for iPhone, providing access to their mammoth collection of e-books for people who are blind or vision impaired.

For most people new mobile apps provide a compelling way to access entertainment and information that can typically be accessed in any number of ways. But for me, accessible apps offer independence, knowledge and self-esteem. Take for example TapTapSee, a fully accessible free iPhone app which I can use to take a photo of something and within a few seconds receive a text message telling me what the image is. Sounds novel you might say, but what it really does is give





me a new set of eyes that I can carry around in my pocket. Imagine trying to remember the colour of every shirt in the wardrobe from touch. Trust me it's much harder than you think. TapTapSee gives me the ability to take a shirt out of the wardrobe and know what colour it is – a great trick for when I'm trying to look like a professional in a business suit with a tie. With this type of mobile technology many people with disability are able to independently do things that were previously impossible. It may not matter that much if I wore a green shirt with a blue tie and a brown suit to work at the circus, but it's certainly not acceptable working in the Sydney CBD.

Another favourite app is TripView, which I use every day to tell me, based on GPS trackers, exactly when my bus will arrive. Speaking of which, accessible GPS apps have made another huge

Wayne using his favourite app, TapTapSee. He simply takes a photo of an object and it reads out a description.

difference to my independence – no longer do I have to wait until someone is able to take me to that new shop, café or pizza joint. All I need to do now is put the address into my accessible GPS app and off I go.

As the above examples show, these benefits can be simple everyday benefits – they don't have to be earth shattering – although those kinds of changes are good too. Startups like Israeli firm Orcam are already selling glasses technology that acts as "artificial vision" for people with low vision, and the possibilities of technology like Google Glass for people with disability are endless.

Most people with disability want to

be able to do the same kinds of things that everyone else does, albeit often in a very different way. Mobile applications and mobile websites incorporating universal design principles from inception can be used by the millions of people with disability, while apps and websites which don't consider universal design can deny access to our modern digital world.

The M-Enabling initiative, supported by ACCAN, seeks to highlight what a huge difference mobile technology can make for people with disability. More importantly, we want to foster collaboration between manufacturers, developers, and end-users, so that hopefully one day soon accessibility is the norm in apps and websites and people with disability will be able to participate in ways never before imagined.

Accessibility shootout: iOS vs Android

Choosing a smartphone or tablet with accessibility features built in will help you take full advantage of these devices.

Below is an overview of the accessibility features of iOS and Android to help you choose the right device for your needs.

iOS: Apple's iOS is great for most people with disability. You can easily toggle on/off accessibility features from the home screen.

- › If you are blind or have low vision, use VoiceOver as your screen reader. Siri and Voice Control enable you to use your phone and complete tasks via voice commands. Braille displays can be used with your device.
- › If you are Deaf or hearing impaired, you can communicate with FaceTime video calling. Also, the iPhone 4s and iPhone 5 are hearing-aid compatible.
- › If you have a mobility disability and have difficulty with some gestures, such as pinching the screen, use AssistiveTouch to change pinch gestures to tapping.
- › If the user has an intellectual disability, Guided Access allows a parent, teacher, or therapist to limit the device to stay on one app, helping the user stay focused on the task at hand.
- › Apple's upcoming iOS7 update contains a switch control function, which allows users, such as quadriplegics, to select options by moving their head left or right. The default contrast ratio is not ideal for people with low vision.

Android: Android accessibility features are mainly focused on screen reading and screen magnification (great for people who are blind or vision impaired), however Android does not go

into the same depth as iOS in catering for a range of disabilities.

- › TalkBack is the pre-installed screen reader and can be used along with Vibration Feedback and Sound Feedback functions.
- › Explore by Touch allows you to touch your phone's screen and hear what's under your finger.
- › General accessibility settings allow you to modify your device's display and sound options, such as increasing the text size and ending a call using the power button.

Our verdict: iOS is the clear accessibility winner



APP SPOTLIGHT

› TapTapSee (iOS).

How does a person who is blind or vision impaired know what type of shirt they are putting on in the morning? Take a photo of an object using TapTapSee and within seconds receive a description of what it is.



› TripView (iOS and Android)

reads out to people who are blind or vision impaired when their bus, train or ferry is coming in real time.



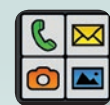
› IDEAL Item Identifier (Android)

users can take a picture of a barcode and it reads out the description.



› Big Launcher (Android)

strips down a phone's main screen and allows the user to have just six enlarged buttons to choose from.





Using the new video relay service

Deaf community calling the shots

What do you do if you're running late for an appointment? For most people, it's simply a matter of picking up the phone and making a quick call. But for Deaf, hearing impaired or speech impaired Australians, this basic task has until recently been simply out of reach. That was until June this year

when, following years of campaigning by ACCAN, two new communications services offered by the National Relay Service (NRS) were switched on.

Video relay

Deaf Australians can, for the first time, contact friends and family or services by making a video call in their first language,

Auslan, via the NRS. People simply sign their message to the NRS operator, who translates the message to the intended recipient.

SMS relay

When Deaf Australians are out and about and need to contact a person or service that doesn't use SMS, they can now send a text message to the NRS, which will relay the message to the recipient by a voice call. Responses are then sent back via SMS – perfect for when you're running late for that appointment.

While SMS relay can provide access to emergency services via the NRS, it's important that it is used in combination with other methods of contacting emergency services, such as asking someone nearby to call 000.

Road testing the NRS

› **Kyle Miers** from Deaf Children Australia is ecstatic about the new video relay service as he can now make calls in his first language, Auslan. It now takes him about 7-10 minutes less time to make a call via the new video relay than it would with a traditional teletypewriter (TTY) call. "It really has improved my work performance greatly," said Miers.

› **Gay Kerridge** works for the Yarra Ranges Council in Victoria and previously used a teletypewriter through the NRS for everything from work to booking dates with women. However, with advancements in technology, he can now do it all himself through Facebook, instant messenger and Skype. For Gary, this is much more convenient for personal conversations with family and friends as he doesn't have to go through a third person. When needing to quickly change a flight booking or order a pizza, he uses the NRS IP relay (a form of instant messenger) but doesn't use the video relay much as the internet speeds are too variable wherever he goes.

Death and the internet



About ACCAN Grants:
ACCAN awards over \$265,000 annually to consumer education and research projects. Visit www.accan.org.au/grants

More and more people now have online bank accounts, email addresses, social networking accounts such as Facebook and LinkedIn, and digital assets such as eBooks and music files. So it was only a matter of time before the question arose: what happens to these online assets and accounts after someone dies?

A team of researchers from the University of Melbourne, under the ACCAN Grants Scheme, investigated issues of online memorials, bequeathing, and preserving digital materials after death. The researchers sifted through various licencing policies, examined terms of use agreements and copyright laws and interviewed a range of people, from funeral directors, to internet service providers and estate planning lawyers.

Overwhelming, the researchers found that if you don't manage your digital legacy, items of immense personal value (photographs, for

example) will become inaccessible and/or destroyed.

What are some of your options?

- Facebook, Twitter and YouTube allow you to download all your content, uploads and archives. You can store this data on an external hard drive.
- Make sure data is saved in a format that can be used at a later date. Save files in popular formats, such as JPEG or MP4.
- Facebook allows users to entirely delete their profile upon death (appropriate evidence needs to be supplied by relatives or friends). Alternatively, the profile can be converted to 'memorial status'.

Many Australians are now creating digital registers which document all online assets and activities. Including this register in a Will helps to preserve digital assets and to prevent identity theft, damage to reputations and privacy intrusions. It also allows the

bequeathment of online images, for example, to happen a lot easier:

How can you create a digital register?

1. Compile a list of all the internet services that store your digital assets. This list can range from social networking sites, to cloud services to online gaming accounts.
2. Provide the URL for each account or service. Usernames and passwords should also be provided.
3. Check the 'terms of use agreements' as some do not allow the transferring of an account (including username and password) between individuals.
4. Replace books and music with other copies. In most cases digital music files and electronic books cannot be bequeathed as their licence allows you to use but not own the file.
5. Nominate someone to act upon the instructions in your digital register, such as an executor or someone who you trust.

It's our ABC too

Imagine watching a TV show and not knowing that a police officer is holding up a vital piece of evidence, or that the villain is drawing their gun, or that a train is bearing down on the heroes tied to the tracks. Unfortunately, 600,000 blind or vision impaired Australians face this situation every time they try to watch a TV show because audio description (AD) services are not included in TV programs.

Blind Citizens Australia (BCA), an ACCAN member, recently lodged 21 complaints with the Australian Human Rights Commission against the ABC and federal government, arguing that their failure to provide an ongoing AD service goes against the *Disability Discrimination Act 1992* and the United Nations' *Convention on the Rights of Persons with Disabilities*.

The ABC ran a trial of AD for 13 weeks in 2012. For those 13 weeks, the blind and vision impaired were finally able to enjoy, and understand, some of their favourite ABC TV shows. BCA, along with Media Access Australia, Vision Australia and ACCAN, sent 30,000 postcards from consumers to Senator Stephen Conroy and the ABC's managing director Mark Scott urging them to have AD continue past the trial. Despite these efforts, the AD service was switched off once the trial ended.

The ABC was recently given close to \$90 million in additional funding in the 2013 budget, but despite the AD service costing only \$1 million a year to operate, they have given no indication that they would begin the service again.

Greg Madson, vice president of BCA, has said, "People think that this is simply about television but it's more than that. It's about our right to enjoy all parts of life just like everyone else".



What is audio description?

Audio description (AD) is a way to describe the visual elements of TV programs, such as scenes, characters, events, or any other visual aspects of a program. The AD is presented as an additional audio track that can be played alongside the regular dialogue of the show. The visual elements described by the AD track are crucial for people who are blind or vision impaired to understand a show.

Meet the campaigners

Emma Bennison

Emma is a Board member of Blind Citizens Australia and is also the CEO of Arts Access Australia. Emma has a young family and wants to enjoy television with her children.

Scott Nixon

Scott loves audio described cinemas and DVDs. Scott is an avid Doctor Who fan but is unable to watch this on Australian TV as there is no audio description, unlike in the UK.

Mary Lovett

Mary received the Order of Australia Medal in 2013 for her work for the blind and vision impaired. Mary says: "I felt a true sense of independence at being able to access programming on the ABC during the technical trial of audio description, but was upset when the trial came to an end, excluding me from the audience once again".

Bruce Ind

Bruce is a Board member of Blind Citizens Australia and is a regular viewer of the New Inventors program. Without being able to see what the invention is or how it works, Bruce has to rely on family or friends to describe what is happening which is frustrating when the technology is readily available to enable independent viewing.

Barry Chapman

Barry is a Board member of Blind Citizens Australia and watches a number of programs on the ABC such as *Crownies* and *Midsomer Murders*. Barry notes that one episode of *Midsomer Murders* did not have any dialogue for at least the first five minutes and it was impossible from the background sounds to determine what was happening.



“
People think that this
is simply about television
but it's more than that.
It's about our right to
enjoy all parts of life just
like everyone else.
”

— 10
ISSUE
SPRING 2013

accan

Australia's watchdog for communications consumers