

# Assistive Technology in the Workplace

FOR PEOPLE WITH A DISABILITY



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National Disability Coordination Officer Program  
An Australian Government Initiative

University of Ballarat  
Learn to succeed





## Assistive Technology in the Workplace

**This booklet provides information about technology that can be used in the workplace by people with a disability.**

People with a disability use assistive technology for a whole range of tasks. Whether it is simply accessing print media or communicating on the telephone assistive technology provides a vast array of solutions. Hardware such as keyboards and the computer mouse are available specially designed for people with physical disabilities. Voice recognition technology allows many people with physical disabilities or vision impairments to control their computer. Simple adjustments to a car will enable people with physical disabilities to be mobile. The solutions are many.

This booklet is by no means comprehensive. For example it proved virtually impossible to narrow down the array of different technology used by people with a physical disability. Instead, a comprehensive list of contacts has been provided so that the reader can explore the many solutions available.



A section in the booklet provides some information of the accessibility features of iPads and Smart Phones which often provide workplace solutions.

Exploring the use of assistive technology in the workplace can be the difference between getting or missing out on a job. If in doubt consult or contact any of the various contacts listed in this booklet.

## Deaf / Hearing-Impaired

This section focuses on technology that is used by people who are deaf or hearing impaired. This technology generally falls into two groups – listening devices and text based technology. A third area focuses on web based videoconferencing technology for people who are Deaf and who use sign language. Such technology includes laptops or desktop computers with webcams that use free software such as Skype to transmit sign language interpreters. This is particularly valuable for the Deaf living in rural and remote areas where accessing sign language interpreters can be problematic.



### Text Based Technology

For many people who are Deaf or hearing impaired their hearing loss is such that amplification alone is not enough to provide access. These people often require text based technology. Strategies for using text based technology in the workplace are many. For example smart phones can provide access to email and instant messenger allowing the Deaf or hearing impaired person mobile telephone access. Other devices such as laptops and the TTY allow text based access to the telephone.



## Telephone Typewriter

A **Telephone Typewriter (TTY)** is a special device that lets people who are deaf, hearing or speech-impaired, or deafblind use the telephone to communicate “live”, by typing messages back and forth to one another instead of talking and listening. The conversation can be read via a small or large fluorescent display screen, a small in-built paper printer or in Braille. A TTY is required at both ends of the conversation. There are braille versions available for the Deafblind.

The National Relay Service (NRS) facilitates “live” telephone conversations between people who are deaf, hearing, speech-impaired, deafblind and the wider community. A NRS operator acts as a conveyer of messages between both parties. The NRS is mainly accessible through a TTY. Only one TTY is required for the user to contact a hearing person using this service, for the cost of a local call. It is available 24 hours a day, 7 days a week. The NRS also has a direct emergency service number (106) which ensures prompt access to fire, police and ambulance services.

To access the NRS the caller simply dials 133677 and quotes the number they wish to call.

The Internet Relay Service (IRS) provides free access to the NRS through computers, laptops, iPhones and iPads with internet connections (including wireless). Simply enter the number you wish to call (there is no need to call the NRS on 133677).

For more information on the National Relay Service go to the following links:

- [www.relayservice.com.au](http://www.relayservice.com.au)
- [www.iprelay.com.au/call/](http://www.iprelay.com.au/call/)

### Note:

- Requires a TTY or a computer / laptop. To access the NRS through a laptop or computer connection it requires a “High-speed” internet.
- Some TTY options feature a flashing ringer, large visual LCD display, volume control and answering machine and braille versions.
- TTYs are available for a small rental fee through the Telstra Disability Equipment Program

<http://telstra.com.au/abouttelstra/commitments/disability-services/disability-equipment-program/>

### TTY – Further information:

- [www.printacall.com.au](http://www.printacall.com.au) Printacall
- [www.wom.com.au](http://www.wom.com.au) Word of Mouth



## Telephone – Captioned (CapTel 800i)

In 2010, the Australian Communication Exchange (ACE) commenced Australia's first captioned telephone trial. The CapTel works like any other phone with one important difference: It shows the Deaf or hearing impaired user every word the other person says throughout the conversation on a screen that is part of the telephone. CapTel users can listen to the caller, and also read live written captions during the call. Both callers can use their own voice to talk using CapTel.

### *Benefits of the Captioned Telephone*

CapTel enables the hearing impaired to make and receive phone calls while using their own voice. Whoever they are conversing with has everything they say captioned on the CapTel screen. Calls are made in the same way as a normal telephone call.

It is useful for Deaf and hearing impaired people:

- Who find it difficult to hear and understand telephone conversations.
- Who are able to talk clearly and read captions.

### *Further information:*

The Australian Communication Exchange are currently running an extensive trial of the system. Contact them or information about the CapTel trial.

[http://aceinfo.net.au/index.php?option=com\\_content&view=article&id=6&Itemid=17](http://aceinfo.net.au/index.php?option=com_content&view=article&id=6&Itemid=17)

## Live Remote Captioning

Live remote captioning is increasingly used in the workplace by people who are Deaf or hearing impaired to access meetings and training. It requires access to a laptop or desktop computer, high speed internet access and in some cases a data projector to transmit captioning to a large screen.

Captions are sent through the internet by a remotely based captioner who is linked to the meeting or training through either Skype or the telephone. The captions are transmitted to a laptop or desktop computer providing access for the person who is Deaf or hearing impaired.

### *Further Information:*

- <http://captioningstudio.com/>
- [www.redbeemedia.com/services/live-remote-captioning](http://www.redbeemedia.com/services/live-remote-captioning)

## Listening Devices

There are many telephone listening devices for people who are hearing impaired on the market. An example is the Oricom Loud and Clear described below.



### Oricom Loud And Clear Amplified (Tp1100an)

This amplifies the sound for the user thus improving access to the telephone in the workplace. Amplification is adjustable using tone controls. It benefits people with mild-to-moderate hearing loss and those using it in noisy environments.

Compatible with hearing-aids.

#### Further information:

- [www.oricom.com.au/tp1100an-amplified-phone.html](http://www.oricom.com.au/tp1100an-amplified-phone.html)

#### Available from:

- [www.printacall.com.au](http://www.printacall.com.au) Printacall

## Artone Bluetooth Loopset

There are several Bluetooth devices on the market that provide assistance to use the telephone, particularly mobile phones. They provide wireless connectivity between hearing-aids and Bluetooth-capable mobile phones or listening device. Some have multiple capabilities such as providing better access to work place activities like meetings.

#### Benefits of the Bluetooth Loopset:



- People with mild to moderate hearing loss.
- People with a hearing-aid or device equipped with a "T-switch".
- People who use Bluetooth facilities on their mobile phone, iPod or computer.

**Note:** Requires "T-switch" on the hearing-aid or device being used, access to Bluetooth facilities, and an USB charging outlet.

#### Further information:

- [www.artonecs.com/BTLS.html](http://www.artonecs.com/BTLS.html)
- [www.printacall.com.au/pdf/artone-bluetooth.pdf](http://www.printacall.com.au/pdf/artone-bluetooth.pdf)

#### Available from:

- [www.printacall.com.au](http://www.printacall.com.au) Printacall



## Conversor Pro (Personal Communication Aid)

A small, simple, lightweight, discreet and wireless FM listening device providing sound clarity and volume in all situations whether it's held in your hand, hung around your neck or placed near the sound source. It is useful for providing better audio access to meetings either one on one or large meetings.

Compatible with hearing aids and cochlear implants.  
Can be used with and without a "T-switch".

### **Benefits of the Personal Communication Aid:**

Discreet and portable sound enhancer which can easily be used in multiple situations ranging from one-on-one discussions with a client or work colleague, as well as group meetings or training seminars.

### **Further information:**

- [www.printacall.com.au](http://www.printacall.com.au) Printacall
- [www.sonici.com.au](http://www.sonici.com.au) Sonic Innovations Pty Ltd

Printacall have a wealth of information about a variety of listening devices that can be used for meetings and accessing the telephone. It is highly recommended that the reader contact them for further information.



## Remote Video Conference Sign Language Interpreting Via Skype

Many people in the Deaf community who use sign language can access sign language interpreters through the internet using software such as Skype or OVOO. All that is required is a laptop or desktop computer with a fast internet connection (ADSL 2 Minimum). This is useful, particularly for people who are Deaf who reside in rural areas where access to sign language interpreters is limited. All that is required is a good quality webcam based computer.

### **For more information contact Auslan Services**

[www.auslanservices.com](http://www.auslanservices.com)  
Telephone: 1300 287 526  
Email: [admin@auslanservices.com](mailto:admin@auslanservices.com)



# Blind / Vision-Impaired

There are a wealth of devices available for people who are Blind or vision impaired. These devices allow access to mobile phone, provide access to braille on hand held devices or simply allow access to print media. Some of these are described in this section.

## Braille

The following compact and portable Braille displays are compatible with most mobile communication devices including mobile / smart / touch phones, iPads, PDAs, laptops and desktop PCs. Wireless Bluetooth facilitates access to most PC applications, emails, text messages, documents and notepads. The Braille keyboard enables reading and writing in both text and Braille. Notes can be typed and saved for later retrieval. They have a variety of applications in the workplace for communications and access to computer based print media.



### EasyLink-12

Has all the standard features of a pocket-sized Braille display with Bluetooth capabilities.

[www.quantumrlv.com.au/EasyLink-12.html](http://www.quantumrlv.com.au/EasyLink-12.html)



### Esys12

Compatible with screen readers such as JAWS, Dolphin SuperNova, Window Eyes and Nuance Talks. Featuring 2 joysticks, USB port and SD card slot, the Esys also offers in-built applications such as a diary, notepad and alarm reminder.

[www.opteksystems.com.au/esys12.htm](http://www.opteksystems.com.au/esys12.htm)

[www.lowvision.com.au/downloads/Esys%20portable%20braille%20displays%20oflyer.pdf](http://www.lowvision.com.au/downloads/Esys%20portable%20braille%20displays%20oflyer.pdf)



### VarioConnect12

Also known as the "Connie". Compatible with screen readers such as JAWS, Nuance Talks and the VoiceOver on the Apple iPhone. The audible sounds can be muted during meetings or conferences, thus allowing notes to be typed quietly.

[www.baum.de/en/products/brailledisplay/vconnect12.php](http://www.baum.de/en/products/brailledisplay/vconnect12.php)

[www.baum.de/cms/fileadmin/downloads/prospekte/en/VarioConnect.pdf](http://www.baum.de/cms/fileadmin/downloads/prospekte/en/VarioConnect.pdf)

## Screen Electronic Magnifiers

Also known as Closed Circuit Televisions (CCTVs), screen magnifiers enlarge text, pictures and graphics using an in-built camera, onto a computer, laptop or TV. They are available in many forms including portable, handheld, electronic and reading software. Some also include text-to-speech capabilities. In many cases, the magnifier may require a much larger screen to maximise full viewing. They provide access to print based media in the workplace.

Some commonly used screen magnifiers are listed at

[http://www.rsb.org.au/Our\\_Services/Adaptive\\_Technology/Electronic\\_Magnification](http://www.rsb.org.au/Our_Services/Adaptive_Technology/Electronic_Magnification)

Some of these are shown below:



### Merlin

The LCD screen pivots vertically and horizontally. It has 7 viewing modes and up to 2.4 to 77 X magnification.

[www.enhancedvision.com/low-vision-product-line/merlin-lcd-desktop-video-magnifier.html](http://www.enhancedvision.com/low-vision-product-line/merlin-lcd-desktop-video-magnifier.html)



### Smartview

Offers a 22" LCD widescreen monitor and a page locator light. The monitor can be adjusted up and down, swivel left and right and tilt forward and backward.

[http://www.humanware.com/en-australia/products/low\\_vision/desktop\\_portable\\_magnifiers/\\_details/id\\_211/smartview\\_synergy\\_si\\_desktop\\_magnifier\\_with\\_advanced\\_control.html](http://www.humanware.com/en-australia/products/low_vision/desktop_portable_magnifiers/_details/id_211/smartview_synergy_si_desktop_magnifier_with_advanced_control.html)

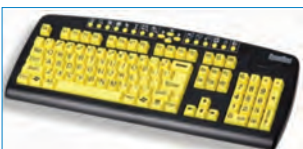


### Topaz

Has a range of 17"-24" LCD widescreen monitors with HD clear sharp image quality. A whole page can be viewed on the screen without needing to constantly move the document. A USB port can connect to the PC or laptop to view files. Also features Freeze Frame.

[www.lowvision.com.au/webinfo/cctv/topaz/topaz\\_xl.htm](http://www.lowvision.com.au/webinfo/cctv/topaz/topaz_xl.htm)

[www.freedomsscientific.com/products/lv/topaz2-product-page.asp](http://www.freedomsscientific.com/products/lv/topaz2-product-page.asp)



### Zoomtext Large Print keyboard

Available in Black-on-yellow or White-on-black. Can be used with some screen magnification software such as JAWS, MAGic and ZoomText.

[www.quantumrlv.com.au/ZoomText-Keyboard](http://www.quantumrlv.com.au/ZoomText-Keyboard)

[www.freedomsscientific.com/products/lv/magic-keyboard-product-page.asp](http://www.freedomsscientific.com/products/lv/magic-keyboard-product-page.asp)

[www.aisquared.com/zoomtext\\_keyboard](http://www.aisquared.com/zoomtext_keyboard)



## Readit Wand

Ideal for those with vision, learning and reading difficulties. This portable reader & magnifier plugs into any USB port (computer, laptop, TV, or touch screen display devices). The in-built 5MP camera scans print / electronic materials, documents, books, journals, tables or graphs into high resolution images which are instantly enlarged onto the screen.

Multi-lingual software reads aloud the contents of the image in the same language. It can also import PDF and Word documents, as well as emails and other scanned files.

At under 700g, the Readit Wand is lightweight and compact enough to fit in a laptop backpack, so it can be used anywhere without access to power.

Compatible with ZoomText and Dolphin SuperNova Access Suite (available with Braille).

[www.visionaid.co.uk/product\\_view.php?pid=90021](http://www.visionaid.co.uk/product_view.php?pid=90021)



## BrailleNote Apex

BrailleNote Apex features a keyboard, speech synthesizer (in conjunction with a screen reader), Braille display, WiFi, wireless Bluetooth and USB connectivity.

In-built software facilitates word processing, web browsing, book reading, email access, instant messaging, voice recording / playback, listening to media files, connectivity to Braille printers and embossers.

Text documents and emails can be read in Braille. Contact details, emails, appointments and calendar alarms can be synchronized with the PC. Meeting notes and audio books can be recorded and re-played anywhere on the BrailleNote using high quality stereo sound. Other features include 8GB memory storage and 3 USB ports.

All BrailleNote Apex models are available with either a Braille or a QWERTY keyboard. Other models include the VoiceNote Apex which features speech output, and the BrailleNote GPS which determines the easiest route to the destination via preferred mode of transport with easy-to-follow maps.

[www.humanware.com/en-australia/products/blindness/brailnotes](http://www.humanware.com/en-australia/products/blindness/brailnotes)

There is a wide range of hardware and software that provides access to print material in the workplace that is designed for people who are Blind and vision impaired. For guidance and information contact:

**Vision Australia** [www.visionaustralia.org.au/info.aspx?page=587](http://www.visionaustralia.org.au/info.aspx?page=587)

**Quantum technology** [www.quantumrlv.com.au](http://www.quantumrlv.com.au)

**Spectronics** [www.spectronicsinoz.com](http://www.spectronicsinoz.com)

# DeafBlind



## Deafblind Communicator

The DeafBlind Communicator combines electronic Braille and texting technologies in one portable device to enable Deafblind and speech-impaired people to communicate in real-time.

There are 2 units, the DBC (phone with visual display) and a BrailleNote device with specialised DB software in both, which are activated via wireless Bluetooth. Optional mPower software enables access to other applications such as emails, diary organizer, word processing, web browsing and book reading.

There are 3 modes of communication :

- **Face-to-Face:** Using a BrailleNote device, the Deafblind person types a message (in Braille) which is converted into text displayed on the DBC screen. The sighted person types a response into the DBC which is then translated into Braille on the BrailleNote.
- **Direct-to-other-BrailleNote & DBC-users:** The BrailleNote also functions as a TTY (Telephone Typewriter) which can be used to connect with another TTY or a relay service. The DBC can communicate directly with other DBCs or BrailleNotes.
- **Mobile-SMS / Text-messaging:** Using a SIM card (with a text plan) and wireless Bluetooth connectivity, the DBC can send text messages to any mobile phone, via the BrailleNote.

**Note:** *The DBC cannot be used for voice calls, only SMS / text messages.*

### Further information :

[www.humanware.com/en-usa/products/blindness/deafblind\\_communicator/\\_details/id\\_118/deafblind\\_communicator.html](http://www.humanware.com/en-usa/products/blindness/deafblind_communicator/_details/id_118/deafblind_communicator.html)

**Able Australia** [www.ableaustralia.org.au](http://www.ableaustralia.org.au)

# Physical Disabilities

People with physical disabilities can include people who use wheel chairs, people with cerebral palsy, people with motor and coordination difficulties and even people with severe arthritis.

There is a huge amount of technology available for use by people with physical disabilities in the work place. The technology can range from voice recognition technology such as Dragon Naturally Speaking to access computers, to specially designed hardware for computers such as the mouse or keyboard. Examples include the Bigtrack Trackball mouse and flexible keyboards that are designed for a range of disabilities. Other technology is designed for everyday tasks such as turning pages or to allow people to drive motor vehicles.

For more information about the types of technology used by people with physical disabilities contact JobAccess. This is a federal government program that provides funding for workplace modifications. They have a vast array of information and experience on the types of technology utilised by people with physical disabilities.

JobAccess contact details for the Workplace Modifications program can be found at:

[http://jobaccess.gov.au/Employers/Financial\\_help\\_and\\_wages/Workplace\\_modifications\\_and\\_adjustments/Pages/home.aspx](http://jobaccess.gov.au/Employers/Financial_help_and_wages/Workplace_modifications_and_adjustments/Pages/home.aspx)

## Places to contact for advice on assistive technology for people with physical disabilities

The agencies listed below and on the following pages also have a wealth of information about technology utilised by people with physical disabilities. It is strongly recommended that they be contacted to explore all options.

### Yooralla

Telephone: 03 9666 4500  
TTY: 03 9916 5899  
Fax: 03 9654 7779  
Email: [yooralla@yooralla.com.au](mailto:yooralla@yooralla.com.au)  
Web: [www.yooralla.com.au/services/independent-living/comtec](http://www.yooralla.com.au/services/independent-living/comtec)

### Sci Workforce (Spinal Cord Injuries Australia)

**Physical and mobility-impaired adults in Australia.**

Telephone: 02 9356 8201 / 02 9356 8064  
Fax: 02 9356 1135  
Email: [workforce@sciworkforce.com.au](mailto:workforce@sciworkforce.com.au)  
Web: <http://scia.org.au/employment-sci-workforce>

## Sydney Employment Development Services (Cerebral Palsy Alliance)

**Physical and mobility-impaired, and ABI adults in NSW.**

Telephone: 02 9413 3400 / 02 9635 7600  
Fax: 02 9413 3266 / 02 9635 7800  
Email: [nseds@cerebralpalsy.org.au](mailto:nseds@cerebralpalsy.org.au) / [wseeds@cerebralpalsy.org.au](mailto:wseeds@cerebralpalsy.org.au)  
Web: [www.cerebralpalsy.org.au/about-us/jobs/working-in-our-services/sydney-employment-development-services-seds](http://www.cerebralpalsy.org.au/about-us/jobs/working-in-our-services/sydney-employment-development-services-seds)

## Arthritis Australia

**Provides information, advice and support to physical and mobility-impaired Australians.**

Telephone: 1800 111 101 Freecall / 02 9518 4441  
Fax: 02 9518 4011  
Email: [info@arthritisaustralia.com.au](mailto:info@arthritisaustralia.com.au)  
Web: [www.arthritisaustralia.com.au](http://www.arthritisaustralia.com.au)

## Brain Injury Australia

**Provides information, advice and support for people with ABI in Australia.**

Telephone: 1800 272 461 Freecall / 02 9808 9390  
Email: [admin@braininjuryaustralia.org.au](mailto:admin@braininjuryaustralia.org.au)  
Web: [www.bia.net.au](http://www.bia.net.au)

## Brainlink Services Ltd

**Provides information, advice and support for people with ABI in Australia.**

Telephone: 1800 677 579 Freecall / 03 9845 2950  
Email: [admin@brainlink.org.au](mailto:admin@brainlink.org.au)  
Web: [www.brainlink.org.au](http://www.brainlink.org.au)

## Cerebral Palsy Alliance

**Provides information, advice and support to Australians with Cerebral Palsy.**

Telephone: 02 9479 7200  
Fax: 02 9479 7292  
Email: [info@cerebralpalsy.org.au](mailto:info@cerebralpalsy.org.au)  
Web: [www.cerebralpalsy.org.au/home](http://www.cerebralpalsy.org.au/home)

## Limbs 4 Life

**Provides information, advice and support to amputees in Australia.**

Telephone: 1300 782 231 Freecall  
Email: [info@limbs4life.com](mailto:info@limbs4life.com)  
Web: [www.limbs4life.com](http://www.limbs4life.com)

## Motor Neurone Disease Australia

**Provides information, advice and support to people with Motor Neurone Disease in Australia.**

Telephone: 1800 777 175 Freecall / 02 9816 5322  
Fax: 02 9816 2077  
Email: [info@mndaust.asn.au](mailto:info@mndaust.asn.au)  
Web: [www.mndaust.asn.au](http://www.mndaust.asn.au)

## Multiple Sclerosis Australia

**Provides information, advice and support to people with MS in Australia.**

Telephone: 1800 042 138 Freecall  
Fax: 07 3840 0813  
Email: [mconnect@msaustralia.org.au](mailto:mconnect@msaustralia.org.au)  
Web: [www.mssociety.org.au](http://www.mssociety.org.au)

## Muscular Dystrophy Australia

**Provides information, advice and support to physical and mobility-impaired Australians.**

Telephone: 03 9320 9555  
Fax: 03 9320 9595  
Web: [www.mda.org.au](http://www.mda.org.au)

## Physical Disability Australia Ltd

**Provides information, advice and support to physical and mobility-impaired Australians.**

Telephone: 02 6567 1500  
Fax: 02 6567 1500  
Email: *available online*  
Web: [www.pda.org.au](http://www.pda.org.au)

## SCOPE

**Provides information, advice and support to physical and multiple disabilities in Victoria.**

Telephone: 03 9843 3000  
Email: [contact@scopevic.org.au](mailto:contact@scopevic.org.au)  
Web: [www.scopevic.org.au](http://www.scopevic.org.au)

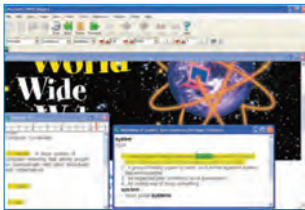
## Spinal Cord Injuries Australia

**Provides information, advice and support to physical and mobility-impaired Australians.**

Telephone: 1800 819 775 Freecall (outside Sydney) / 02 9661 8855  
Fax: 02 9661 9598  
Email: [office@scia.org.au](mailto:office@scia.org.au)  
Web: [www.scia.org.au](http://www.scia.org.au)

# Learning Disability

There is an abundance of software that is available for people with learning disabilities to access print based material and word processing programs that can be used in the workplace. A couple of examples are described below. The needs of people with learning disabilities vary greatly. It is therefore recommended that strong guidance be sought from agencies listed at the end of this section.



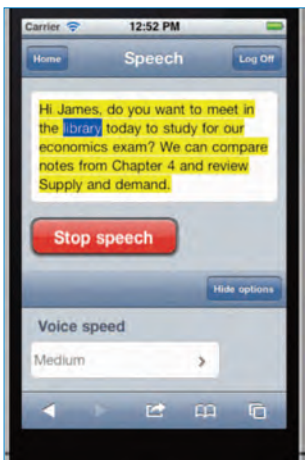
## Kurzweil 3000

A digital text-to-speech reading tool specifically designed for people with a print disability, low vision and learning or reading difficulties such as Dyslexia.

Kurzweil 3000 combines scanning, Optical Character Recognition, screen-reading and magnification. It works on a computer or laptop in conjunction with a flatbed scanner and synthetic speech to convert the printed word, including internet content into speech.

Can also be used in conjunction with Dragon NaturallySpeaking software.

[www.kurzweiledu.com/files/pdf/Kurzweil3000Windows\\_Datasheet.pdf](http://www.kurzweiledu.com/files/pdf/Kurzweil3000Windows_Datasheet.pdf)



## TextHelp Read & Write Gold

A literacy support tool specifically for users who have a learning disability, Dyslexia or low literacy skills.

It is a toolbar that floats over the top of many Windows, Mac and web based applications. TextHelp reads text documents aloud, highlighting the words as it goes.

Other features include speech input, conversion of text files to PDF or audio format, word prediction, phonetic spell checker, pictorial and speaking dictionary, speaking calculator, and pronunciation tutor. It is available on a CD or USB flash drive.

TextHelp also have specifically designed Web Apps for use with iPad, iTouch, iPhone and most mobile phones and smart phones.

[www.texthelp.com/media/6922/fehe\\_flyer.pdf](http://www.texthelp.com/media/6922/fehe_flyer.pdf)

[www.texthelp.com/uk/our-products/readwrite/features-pc/web-apps](http://www.texthelp.com/uk/our-products/readwrite/features-pc/web-apps)





## Dragon Naturally Speaking

Ideal for those who prefer to input computer text, or control computer applications by using simple voice commands instead of via the keyboard or mouse. Employees and students use Dragon to assist them with reports, presentations, internet research and in some cases examinations. It is also beneficial for those with Dyslexia.

Written documents, spreadsheets, emails and messages can all be created just by talking. Navigating the PC and the web is controlled by the user's voice. Use a digital voice recorder and Dragon will transcribe the audio files back to the PC or laptop.

### *Information and Support*

**Quantum technology**

[www.quantumrlv.com.au](http://www.quantumrlv.com.au)

**Spectronics**

[www.spectronicsinoz.com](http://www.spectronicsinoz.com)

**Australian Learning Disability Association**

[www.adcet.edu.au/alda](http://www.adcet.edu.au/alda)

**Dyslexia Australia**

[www.dyslexia-australia.com.au](http://www.dyslexia-australia.com.au)



## iPad / Tablet Computers

Many computers such as iPads and tablet computers have many inbuilt accessibility features that can be used in the workplace by people with a disability. Some of these are described in this section.

The Apple iPad is a mobile tablet computer for audiovisual media including books, newspapers, movies, music, games, apps and websites. Its size and weight falls between a smartphone, iPod and a laptop. Controlled by a flat multi-touch display screen and a virtual keyboard, assisted by optional accessories for people with specific needs and abilities. A Wi-Fi connection is used to access local area networks and the internet.

The iPad is largely accessible to anyone, including those with physical and motor difficulties and vision or hearing impairments.



### Physical and motor difficulties

[www.apple.com/accessibility/ipad/physical.html](http://www.apple.com/accessibility/ipad/physical.html)

**Thin and lightweight** – easy to hold and to carry, or an iPad Smart Cover can be used to assist with standing it up or laying it at a comfortable viewing angle.

**Large multi-touch display** – high precision and touch sensitive display requires no physical force, just a simple touch with a finger or stylus. A built-in Zoom function can magnify the whole screen, so it's easier to see and touch the smaller links, buttons and images.

**Multiple orientations** – the iPad screen can be viewed horizontally or vertically.

**Onscreen keyboard** – a virtual QWERTY format featuring autocapitalization and autocorrection makes it easier to type and avoid misspellings – these can be spoken aloud if preferred. External physical (Bluetooth) keyboards can also be used.





## Vision impairment

[www.apple.com/accessibility/ipad/vision.html](http://www.apple.com/accessibility/ipad/vision.html)

**VoiceOver** - touch the screen to hear an item's description and to control the iPad. The audio provides iPad information such as battery level, network signal level and time of day. The speaking speed, sound effects, volume and background noise of VoiceOver can be customized to suit the user.

**Wireless braille displays** - the iPad includes built-in access for braille displaying Braille via wireless Bluetooth. Braille text can be read using VoiceOver.

**Zoom** - magnifies the entire screen of any application being viewed or displayed up to 500%.

**Audible Alerts** - used for incoming and outgoing mail, calendar events and keyboard actions.

**Note:** *the new iPad 3 onscreen keyboard has a microphone button that enables the user to dictate text such as emails and SMSs or Facebook status updates. This form of communication may be quicker and easier than using the VoiceOver function.*

## Hearing impairment

[www.apple.com/accessibility/ipad/hearing.html](http://www.apple.com/accessibility/ipad/hearing.html)

**FaceTime** - features high quality video and fast frame rate ideal for those using language as both hand and finger gestures which can be viewed in detail. Skype, video relay services and text relay calls can be accessed by using WiFi online.

**Captioning** - both open and closed captions are able to be viewed onscreen, including videos. Personal movies can be created with captions using a variety of tools and applications. The iPad can be used to access Live Remote Captioning.

**Social networking** - instant messaging, Facebook, Twitter, AOL, Yahoo!, MSN and other internet-based communication apps and services can all be accessed on the iPad.

**Stereo headset compatibility** - the iPad works with a variety of headsets, including Apple earphones and in-ear headphones that have a high-performance microphone capsule built into the cord. This allows customization of music playback or your voice recording.

**'Skype'** - free to download, this benefits those with a hearing impairment, or those that rely on visual face-to-face communication. Skype is a form of video-conferencing using a webcam on the computer, laptop, TV, iPad, iPhone or iPod Touch with WiFi or 3g / 4G access. It can also be used for instant messaging.

**'SoundAMP R'** - benefits those with hearing impairment. Using wired headsets and microphones, this app can customize the volume, sound clarity and background noise. The recording tool captures meetings, seminars, audio-visual presentations, interviews and important information discussed with a client or colleague. The recording can be bookmarked to highlight important points, and exported to a computer or laptop.



### **New apps to look out for :**

'**BrailleTouch**' – benefits those with vision impairment. Still in its development stage, this enables text messages to be created on the onscreen Braille keyboard.

No eyes are required as it is all done by touch, using the six-finger chording process that replicates the standard Braille keyboard. Audio feedback confirms what has been inputted.

BrailleTouch is expected to soon be available in iPad and iPhone / Smartphone versions.

[www.gatech.edu/newsroom/release.html?nid=110051](http://www.gatech.edu/newsroom/release.html?nid=110051)



## **Smartphones**

A Smartphone is like a compact portable computer encompassed within a mobile phone. It offers greater communication options with facilitating telephone services, internet, social networks, email, audiovisual media and installing apps just the same as on the standard desktop PC.

Some Smartphones come with excellent in-built accessibility standards such as the Apple iPhone 4S which has a LCD display of 8MP quality, HD video calling and recording ability, advanced camera / video clarity and other technology capabilities.

### **Vision impairment**

[www.apple.com/accessibility/iphone/vision.html](http://www.apple.com/accessibility/iphone/vision.html)

Includes a highly sophisticated screen reader, Zoom (full-screen magnifier), white on black for higher contrast, wireless Braille display (via Bluetooth), enlarged text size, audible and vibrating alerts, and other accessibility features such VoiceOver which "reads" the text.

The iPhone 4/S can be used with Braille display devices such as the BrailleNote Apex, Brailliant, Esys12, EasyLink12 and VarioConnect12. Messages can be typed and read in text or Braille format.

### **Hearing impairment**

[www.apple.com/accessibility/iphone/hearing.html](http://www.apple.com/accessibility/iphone/hearing.html)

Accesses live captioning and telephone relay services. Some standard features include hearing aid compatibility, TTY (TeleTypewriter) support, visible and vibrating alerts, visual voicemail, instant messaging chat, sharing multimedia files, and FaceTime (using WiFi) which facilitates sign language conversations. Media with captions can also be viewed, with the ability to create your own.

## Blackberry Smartphone

“Oratio” is a screen reader text-to-speech technology software designed specifically for the Blackberry. It can be used for emails, SMS / text messages, MMS chat, etc. Note that not all of the BlackBerry models support Oratio software.

[http://support.humanware.com/en-usa/support/oratio\\_%C2%AE\\_for\\_blackberry\\_smartphones](http://support.humanware.com/en-usa/support/oratio_%C2%AE_for_blackberry_smartphones)

### Useful Information

- Accessible features to consider when buying a mobile phone for a person with a disability

[http://jobaccess.gov.au/Advice/ProductOrSolutionOne/Pages/Telephones\\_mobile\\_phones.aspx](http://jobaccess.gov.au/Advice/ProductOrSolutionOne/Pages/Telephones_mobile_phones.aspx)

- “Choosing a mobile phone : a guide for people with disabilities” (Australian Mobile Telecommunications Association)

[www.amta.org.au/pages/A.Guide.to.choosing.a.mobile.phone](http://www.amta.org.au/pages/A.Guide.to.choosing.a.mobile.phone)

- Australian Mobile Telecommunications Association’s database “GARI” (Global Access Reporting Initiative) identifies accessible features of common mobile phone models

[www.amta.org.au/pages/GARI.Database](http://www.amta.org.au/pages/GARI.Database)

- List of wireless Braille displays compatible with Apple “i” devices

[www.apple.com/accessibility/iphone/braille-display.html](http://www.apple.com/accessibility/iphone/braille-display.html)

## JobAccess

JobAccess is a federally funded program that provides support to employers for making work place adjustments and also to purchase technology that can assist people with a disability in the workplace. Funding for this is accessed through the Employment Assistance Fund (EAF).

The Employment Assistance Fund also includes the Auslan for Employment (AFE) which provides \$6000 per annum for purchasing the services of Auslan interpreters. The Auslan for Employment Scheme can also be used to purchase live remote captioning services in the workplace.

### For more information go to:

[http://jobaccess.gov.au/Workplace\\_modifications/Pages/home.aspx](http://jobaccess.gov.au/Workplace_modifications/Pages/home.aspx)

## Disability Employment Service

The Disability Employment Service (DES) can assist people to identify appropriate technology and process applications for Job Access assistance. To identify a DES provider in your area try the following link:

<http://jobsearch.gov.au/provider/ProviderLocation.aspx?ProviderType=DES&>

### DISCLAIMER

*This booklet is to assist users with general information on assistive technology in the workplace for people with a disability. All links are current as of May 2012. Specific circumstances may affect any information provided. The information is not intended to endorse, recommend, or guarantee any companies, organisations, products, or services mentioned. Users of this booklet must make their own enquiries and, where necessary, obtain their own independent advice in relation to any of the companies, organisations, products or services mentioned. No responsibility is accepted for the consequences of any decisions that users may make as a result of any information they have gained from the booklet.*



