

## CAN EVERYBODY SEE THIS?

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**ABSTRACT:** Print disability includes people who cannot read a conventional book, magazine or website as they are either unable to see the print, hold the item or access the website. Less than 5% of published material, i.e. books and less than 20% of websites are accessible to these people. The numbers of people with a print disability are expected to grow significantly over the next ten years.

To make content available to this community provides immense challenges for any organisation, let alone for a not for profit organisation such as Vision Australia. These range from the usual technical, legal and budgetary challenges to providing and supporting cutting edge technologies to a community generally characterised as elderly.

Vision Australia is well known in the field of print disability but relatively unknown when it comes to technological innovation. However, recent developments in the Vision Australia Information Library Service's (VAILS) free i-access<sup>®</sup> online service are making more and more accessible content available to the print disability community.

The challenge of transitioning library clients from an analogue service to a fully digital service is a major challenge when more than 70% of those clients are over 69 years of age. The transitioning of 18,000 clients to the new digital platform will be achieved on target by the end of this financial year.

At the same time, the library is near completion of a major conversion program converting the collection from analogue to a digital platform which uses a new burn on demand facility to generate 24 hour turnover of books of CD. This opens up options for web download.

The paper will outline some of the challenges in making information more accessible to people in the print disabled community in the home and on the road.

## **CAN EVERYBODY SEE THIS?**

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### **1.INTRODUCTION**

The world of information is defined and designed by the sighted majority. A person who is print disabled doesn't get to read the newspapers, magazines, books, music scores and the other many printed materials that sighted people read and take for granted every day. For many, the only way to be informed is by listening to news stories being broadcast. These are select and few in number, compared to the number of articles published beyond the broadcast media. In fact, only 3-5% of all print based material is accessible to the vision impaired community.

It is the lack of information that is cited as the biggest barrier for the print disability<sup>1</sup> community to participate more fully in life, in the wider community and in having more options and exercising a greater range of choices.

Vision Australia (VA) is working to make print based information accessible to people with a print disability. By using the i-access ® Online Library, clients can access audio books and magazines, Braille books, newspapers and other publications. This collection offers mainly Digital Accessible Information System (DAISY) formatted titles allowing greater accessibility for readers. The breadth of news coverage and the depth of analysis available makes this service a key contributor to accessible information being available immediately.

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<sup>1</sup> <sup>1</sup> In Australia, the Copyright Act 1968 Interpretation part 2. section 10, page 13 defines a person with a print disability as being:

- (a) a person without sight; or
- (b) a person whose sight is severely impaired; or
- (c) a person unable to hold or manipulate books or to focus or move his or her eyes; or
- (d) a person with a perceptual disability

In practice this includes examples such as:

- people with severe arthritis may have difficulty holding a book or turning pages
- people suffering from MS may have functional eyesight but may be unable to read due to severe shaking of head, hands etc
- other physical disabilities or injuries that inhibit the easy use of reading materials such as books, magazines or newspapers
- dyslexia is an example of a perceptual disability

The challenge is to work towards a time when all content is made accessible at the original point of production, a time when agencies such as Vision Australia Information Library Service (VAILS) won't need to exist, a time when all information is immediately and readily accessible to those people who are not part of the sighted majority.

The main focus of this paper is to discuss the VAILS recent development of the i- access ® Online Service, delivering a unique collection of accessible content both online and in hard copy. It is the story of a national information service moving from the 20th to the 21st century and briefly describes a number of challenges faced along the way. These developments are part of our response to meeting the wider challenge of accessibility for the print disability community. In the Australian context this is a revolutionary service, making current news and information available to people who are print disabled.

In the context of the print disability sector, accessibility refers to how easily the content of a print book, web page or audio title is able to be accessed by someone with a print disability.

Accessible information can be defined in many ways, each according to different ideas. A vision impaired person might consider it to be having information in Braille. Someone with a hearing impairment might consider it to be having a loop available. Whatever the view, the notion of information access is wide. It could be anything from a large print leaflet at the local library, having your television programmes audio described, your bank statement in Braille or your local hospital guide in easy to read format.

If asked for a general definition then it may be thought of as being: "Accessible information is information that is presented in a form and style that is easily used and understood by its intended audience"<sup>2</sup>

When VA talks about accessible information it is important to be clear that we are not talking about diluting the content or creating a summary. It is taking information from an inaccessible form and converting, translating or interpreting it into a form an individual can access.

Accessible formats, often referred to as alternative formats, include documents and other items produced, for example, in Braille, on audio, in large print size. Formats refer to the nature of the document, communication method, publication or information rather than the content.

Access to information and services impacts directly on the quality of everyday life of many disabled people, their families and carers. Most of us take for granted the ability to go about our daily lives without experiencing barriers; the same may not always be the case for disabled people.

In practice people use a range of hardware or software to 'read' the page but many web pages, for instance, are not designed to work with this software so the reader can't access the content. The content may be available but not accessible.

## **2.MAIN ELEMENTS OF SERVICE DEVELOPMENT**

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<sup>2</sup> Information Alternatives: A Guide to Providing Accessible Information by Paul Ralph - 2006 page 207

These services are being developed as part of a five year plan called the i-access program at an estimated cost of \$30 million dollars over five years. The elements involved include; converting collections from analogue to digital, building digital content storage systems, developing a 'Burn on Demand digital media production' service and web download service for newspapers, magazines and books. Books are available for download in DAISY (Digital Accessible Information SYstem) audio, DAISY text and Braille formats. Lastly, the project involves a rollout of 18,000 playback devices to the national client base and has established unique training and support programs involving staff and volunteers. The paper will touch on some of these projects. Projects around online storage have been completed while for the DAISY players and digital content creation, processes were established which continue today. The search and delivery functions require ongoing development having established only parts of their overall service vision. Today most library content is in the DAISY format. They projects the VAILS goal of making information accessible and usable and can be broadly divided into four areas:

## **2.1 Digitised content**

A key tangible outcome of the i-access program is the new collection of structured DAISY digital books that are available to library clients. DAISY titles are acquired through DAISY Consortium and commercial purchases, created by converting the current analogue collection, through Vision Australia's own audio production capacity, and new pathways to non Vision Australia content. Braille files are included where available.

## **2.2 Digital playback devices**

The old cassette playback devices have been replaced with DAISY CD players and digital handheld online devices. Necessary training and support for the new technologies has been provided to 'transitioning' clients and is available for any new clients who wish to take up support options.

## **2.3 Online storage capabilities**

This capability is based on a new high-capacity central repository to hold all Vision Australia digital content such as books, newspapers and magazines. The estimated capacity requirement is 100 terabytes.

## **2.4 Search, select and delivery functions**

Clients will be able to search by phone or internet for the books, newspapers and magazines of their choice. Once a selection is made, the content will be delivered to the client by mailed CD or online.

### **3.OVERVIEW**

Blind and vision-impaired people say that the biggest barrier to greater independent participation in society is a lack of accessible information. It is also difficult to envisage informed participation in political and social spheres of life without access to everyday news and current information from daily publications. So equally, it is important to place these services within a wider context of community and service providers, technologies and accessibility.

#### **3.1 Who is the community?**

Statistics show that around 292,700 Australians are blind or vision impaired (2004). This figure is set to increase to 421,600 by 2021 as 'baby boomers' reach retirement age.<sup>3</sup> The print disabled community is significantly greater and is estimated to affect as many as 4 million Australians. This group is underrepresented within the library community. Print disability includes those who have difficulty holding or manipulating books or have a perceptual disability. As a result, people with a whole range of conditions not related to sight may be included as print disabled.

#### **3.2 About Vision Australia (VA)**

VA was formed in July 2004 through the merger of the Royal Blind Society (RBS), the Royal Victorian Institute for the Blind (RVIB), Vision Australia Foundation (VAF) and the National Information Library Service (NILS). Our service provision and reach was expanded further with the amalgamation of the Royal Blind Foundation Queensland (RBFQ) in 2006, and Seeing Eye Dog Australia in 2008. Since 2008 VA has worked closely with Guide Dogs Tasmania. VA is a client of the DAISY Consortium and the World Blind Union (WBU).

VA is a not for profit organization and receives approximately 70% of all funding from individual donations.

VA provides a wide array of services designed to meet needs that will present themselves over the course of a lifetime; beginning with children's services and ranging to employment, independent living, information, sports and recreation, adaptive software and equipment, ophthalmological, orientation and mobility, and a range of other vital services. VA is the leading provider of blindness and low vision services in Australia, enabling more than 41,000 children and adult clients to live the life they choose. Half of our clients are 79 years of age or over and 64% of all clients are female. There is no typical Vision Australia client. Some have no vision, others have limited sight. Over 4000 volunteers assist our 930 staff in providing programs across the country.

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<sup>3</sup> Source: ABS: Ausstats, 2004

### **3.3 About Vision Australia Information Library Service (VAILS)**

The Information Library Service is a flagship service of Vision Australia. The Service provides information and reading materials in accessible formats for people with a print disability. VAILS is part of the library network across Australia. Most Australian libraries have print disabled clients as one of a range of groups that comprise their client base. For VAILS this group is our only focus. Developments in service provision to this group will increase the service models available in the library field and will have implications for service provision at a local level.

VAILS currently provides library services to approximately 18,000 library clients across Australia from two locations that supply specialised alternative format information in Braille, Audio, e-text and Large Print. Approximately 16,000 clients have a DAISY CD player and over 900 have handheld online DAISY players. The library holds approximately 24,000 titles that cover a broad range of subjects and caters to adults, teenagers and children. Over 15,000 of these titles are in a DAISY format. The library also provides a magazine and newspaper service.

A wide range of print alternative books and magazines are available free for loan through postal delivery to clients across Australia. Material is available in a variety of formats including Braille, DAISY audio and DAISY text. A small collection of each of these is available for download from the i-access Online service. The key focus of the download service is the daily newspapers which provide accessible newspapers to clients before the hardcopy hits most peoples' front lawns (discussed in detail later).

The average number of loans per annum by a library client is approximately 62 and this includes books and magazines. Over 32,000 online periodicals are also available via a consortia arrangement with other Victorian public libraries. These cover a wide range of academic and professional publications as well as magazines; these can be accessed via the library's web page. The new services will tap into this existing information stream in the public library network by making the content available in a more portable and flexible manner to our clients. Other library or information services include a reference service to clients and staff of Vision Australia, a reader telephone service and restricted personal support services for the production of alternative format information.

### **3.4 About Our Library Clients**

Similarly to VA clients, 70% of our 18,000 library clients are over the age of 70 years and the balance is mainly adults over the age of 35. The number of children and young adults using the service is quite low. 69% of our clients are female. Some clients are home bound or find it difficult to be mobile. In fact, of the total client base, 44% live alone or in supported care. It would be expected that those who live alone are less likely to have support, particularly for online service and are more likely to be financially disadvantaged.

The importance of the older demographic is that these library clients are likely to be long-term clients who have social needs that the library fulfils over and above the loan of a book. For this client group the relationship established with the library is critical to their well being. The exchange of a physical item is affirmation of care and support. According to internal research conducted in 2007, over 70% of clients

stated that they prefer to receive their loans on a physical media. This group is also less likely to have access to, or the means to afford online services.

## **4.DRIVERS FOR CHANGE**

### **4.1 Analogue to Digital**

Not for Profit agencies such as VA produce much of the library content or buy content at significant cost. This remains the case in the digital environment as it was in the analogue model. The bulk of the audio collection was stored on reel to reel tape masters and reproduced on 4 track and 2 track cassette. Support for analogue technology became increasingly difficult with a lack of spare parts for tape duplication machines. Major manufacturers of analogue tape also left the market. In this context, digitisation of the collection was seen as safeguarding the library's most significant asset and 'future proofing' the collection as the xml structured digital format allows for an easy migration path as new media formats and delivery systems become available.

The organisation recognised that the strategic path for VAILS lay in the modernization and extension of library services. This would then ensure a continued service capability that would provide clients with information pathways supporting recreation, employment and education.

In September 2005 the Vision Australia Board approved the i-access program, clearing the way for the organisation to proceed with the implementation of the five year i-access program. Key to this program was the transition away from the library's aging cassette-based analogue talking book collections and production systems to the DAISY digital format. Over 15,000 titles needed to be digitised.

### **4.2 21st Century Library Services**

VAILS has been running a parallel physical inventory service model with a shelved physical collection until the end of the 2009/2010 financial year when the cassette collection will be decommissioned. At this point the Burn On Demand system will fully support the library's circulation of the DAISY collection. Part of the library's reality over the last five years has been the need to support parallel models at the same time.

### **4.3 Why DAISY?**

DAISY is the international standard adopted in 53 countries, including the libraries provided by blindness agencies in Denmark, the UK, the US, Canada, Japan, Singapore and New Zealand to name a few. The Global Library initiative involving these agencies could mean that the catalogues and information services of all these libraries may be shared in the future.

DAISY structuring in audio books or text books or newspapers enables people who are print disabled to browse in the same way and have the same options a sighted person would have. For example, a blind person can navigate a book in the same way a sighted person might navigate around the hierarchy of an entire web site. All files within the DAISY standard are W3C compliant and include audio (WAVE and MP3) and text (HTML and XML). DAISY is a recognised ISO standard and the technology is freely available for anyone to produce and playback material in the DAISY format. Even Microsoft has a "Save as DAISY" plug-in for the popular MS Word program.

It is practical and user friendly. Previous audio books were very linear, requiring a tape to be fast-forwarded or rewound. DAISY structuring allows a reader to go directly to specific sections, chapters or pages, and place bookmarks. This ability to move around the book is not available with books on tape, CD or MP3 and is seen as one of the ways our clients can really 'navigate' around a book and liberate the persons' reading proclivities.

When applied to newspapers the benefits are enormous. A reader can navigate directly from section to section of a newspaper, from subsection to subsection, headline to headline, from sentence to sentence, phrase to phrase, or word to word. Depending on the playback device, a reader could search for individual words in the newspaper. The other great advantage of the newspaper is that it requires very little internet bandwidth to download because it is only a small xml structured text file.

The other great thing about DAISY is that it is an open technology. That is to say, anyone can create DAISY Books by using a simple computer program or a small recording unit. Further, because it is accepted around the world, the book can be played on a range of hardware and software players manufactured by different companies which all support the DAISY standard.

#### **4.4 Proof of Concept**

A 'proof-of-concept' trial of the DAISY digital format was undertaken in 2005. Utilising an initial 1000 digital book titles already acquired from the Royal National Institute of Blind People (RNIB) in the United Kingdom, VAILS embarked upon a trial of new CD DAISY players. A total of 1000 players were purchased from the two leading suppliers and these were distributed to library clients for assessment.

Machines and CDs were sent to clients along with training kits. Training was provided to participants by phone, at Vision Australia offices and in clients' homes. DAISY formatted material was provided whilst helpdesk and support services ensured that the trial ran smoothly.

Beginning in December 2005, the trial ran for six months involving approximately 1,000 people across Australia. The oldest participant was 104 years old. 98% of participants indicated that they would be happy to continue with DAISY material as their library service.

#### **4.5 DAISY Players**

Devices loaned to library clients can access a wide range of files and formats including most commercially available music and audio books. A client using a handheld online device can access any downloaded

text based content information, and use the device for playing a range of commercially available audio books and music, recording audio notes, accessing newspapers and more. A recent DAISY player on the market, the Plectalk PTX will play DAISY CD books, stream and download content from the library website, link to your PC and uses a USB stick as a backup drive. The device also has Text To Speech Synthesis (TTS) and wireless capability (currently locked down) avoiding the need to have a computer to access content. Flexibility is important as clients are free to use the devices to access many information in a range of formats. These types of devices can access a very flexible range of formats including content on commercial audio CD's, WMA CD's and in compression formats such as Ogg Vorbis, MP3, PCM and AAC. Many can also 'read aloud' from text and Windows Document formats as well as from Braille files. Many also offer advanced recording features to allow users to record and structure a DAISY audio book into navigable parts.

DAISY Players are accessible and user friendly. With audible navigation systems, they give prompts and describe the function of each button so there is no need to recient many instructions. There is also an increasing awareness of the benefits of this technology in dealing with the special learning needs of children in a school setting, for example, products like EasyProducer can speed up format shifting and lower costs for schools in supporting children with special needs. Software readers are available for both MAC and PC and a growing range of mobile phones. The PC version of a reader can be of particular benefit with dyslexia or partial vision where the text can be manipulated to suit some eye conditions and combined with the audio rendition of the file to reach higher levels of content retention.

Bookmarks can be inserted for readers to return to at a later date and some allow the bookmarking of individual sentences – a handy feature to reference quotations. Audio features such as "Where am I?" tell you where you are in the book. When you take a break in reading, the player will recient where you stopped, and resume playing at that same place when you start to read again.

DAISY formatted audio books or text books (including newspapers and magazines) can be downloaded and transferred to small portable devices, such as the VictorReader Stream, or Plectalk Pocket, and retain all the navigational advantages DAISY technology has to offer. There are many types of devices used by people to access a wide range of information independent of any service offered by Vision Australia. The devices are useful and fulfil a wide range of needs including reading aloud Braille files.

## **5.LESSONS FROM THE FIELD**

There are some lessons that are obvious in retrospect. There are many lessons learned by VAILS over the last five years and it is difficult to list them all. The Appendix lists a number of challenges that arose in developing the VAILS service as currently exists.

### **5.1 Training materials**

Don't presume that 'old folks' can't learn or cope with change. People are capable of much if they are well supported through the changes by caring staff, a well run system and good supporting documentation.

After seeing the manufacturers' manuals, library staff developed their own training materials as it was felt that the library client needed a more accessible and targeted manual.

Over time our training packages were modified and improved upon, due to the active and enthusiastic feedback of clients. The package of materials includes a CD containing sample books, a CD with our user manual, the same user manual in large print. The package later included a large laminated image of the DAISY player with labels on key parts of the device. On the back of this sheet was a brief 'cheat sheet'. One of the interesting and counter intuitive suggestions received from clients was a suggestion to include a picture with labels? This also highlights a valuable observation that print disability includes a range of people with a broad range of conditions from completely blind to full vision. We found it was important for the material to be presented in a range of formats. The large print instructions were often read by friends or family clients wanting to help.

The instruction CD was DAISY structured – this was a mistake for people getting their first taste of a new format to have to learn to navigate that format at the same time as learning about it. We quickly changed it to a standard CD so that people could play the instructions in everyday CD players (as well as in the DAISY player) and learn to use the machine while listening to the instructions on a familiar CD player.

The packages were produced in two levels to minimize the amount of information presented. A 'Getting Started Guide' and 'Additional Features Guide' made it much easier for people to either stick with the basics or to build up knowledge. Even the names changed from 'Beginners Guide' and 'Advanced Guide' to be less value laden.

## **5.2 Trainers and supporting crew**

During the initial trials of the DAISY CD player volunteers were recruited in a number of VA offices around the country and they were trained along with local staff to support local users in face to face training. While the system proved beneficial for a small number of users, much effort and time was taken in maintaining skills for volunteers and staff, in coordinating and reporting activities. As VAILS is a national service it is difficult with such a model to maintain an even spread of service across the country, particularly in remote and rural settings. This model later changed to phone based support run by a team of volunteers. The advantage of the improved model is that Reader Services staff are able to book a time that suits the client and the client will be phoned at that time and taken through a session that is tailored to their individual needs. This model is one that can reach every part of the country equally and provides a consistent service to all. It is much easier to maintain the skill level of a small group of people all located together. Many of the things we implement are new for VAILS staff, with little experience to draw on. In that context effective client contact, project planning and reporting is critical to identify new risks.

## **5.3 Digital Conversions Challenges**

To secure the collection in the future and support the DAISY format a major digitization project was implemented over the five year period. While in house conversions continued the project also included

commissioning agencies in Denmark to convert the first batch of 2,000 titles from tape to DAISY structured digital format.

This project raised a number of challenges including that of communication. The VAILS collection of tape masters consisted of two formats – 2 track and 4 track however some tracks on the master tapes would run in the opposite direction to other tracks. This was a traditional method employed to maximize tape use. The technical people across both continents presented drawings with arrows indicating the track breakdown on the tape and the directions of each track but still confusion ensued. The concept was eventually clarified.

When we received the first sample batch of 50 titles we were elated with the quality of the conversion and structuring. It was on this basis that the rest of the 2,000 titles were converted. On receiving the hard drives containing the new conversions of the remaining shipment alarm bells rang as the conversions did not match the quality of the first 50 samples. It appears that the first sample was 'hand crafted' while the remaining shipment was converted in a different way which introduced audible tones and other extraneous sounds onto the recordings. In short, all the conversions needed to be redone at significant cost to the Danish organization and significant delays in delivery to VAILS.

Another aspect to growing the collection quickly was the whole of collection purchase from the Royal National Institute of the Blind (RNIB) in England. VAILS purchased the entire DAISY collection. As a result of the poor structuring of these books at the time, VAILS decided to restructure many of the 12,000 titles purchased.

Our library has spent significant time and resource in growing the collection quickly so that today we have over 15,000 DAISY audio titles on the server ready for download as soon as we are able to redevelop the web front end to enable clients to search and download content directly. We have approximately 6,000 more titles that will be converted and become available over the next 3 years.

## **5.4 Burn on Demand**

The development of a significant bank of audio books on a server has allowed the completion of two further aspects of service redesign. Firstly, the burn on demand service provides a one use CD for the client to use. This is then returned to the library and recycled into other commercial products. The service benefit for the client is that the book is 'burned' for them within 24 hours of the request being made and every book received plays perfectly with no scratches or wear and tear inflicted by other users. The efficiency benefit for the organization is that we no longer have an inventory based distribution structure like libraries holding physical collections. This translates as no reshelving, no chasing 'not on shelf' books, and no space required to hold physical inventory.

The service delivers approximately 1,500 to 2,000 books per day.

While significant developments have been made in moving from the cassette format to CD, VAILS has also undertaken a number of projects and trials to develop an accessible information service focusing on online books and current information such as newspapers and magazines and taking advantage of DAISY structuring. As the flagship of the service, the developing i-access ® Online Service is receiving much

attention from the blindness and print disability communities in Australia and also from our sister agencies in Europe and Asia.

## 6. NEWSPAPERS AND I-ACCESS ® ONLINE SERVICE

Today registered users of the i-access ® Online Service may, at no cost, receive newspapers and magazines made available from Fairfax, News Limited, and other publishing houses. VAILS converts the content to a DAISY format and make it available for allows clients to download the content onto a small handheld device that recognises DAISY structuring. The VictorReader Stream (Figure 1) from HumanWare (<http://www.humanware.com/en-australia/home>) is one of the devices loaned to library clients at no cost. The Plectalk Pocket (Figure 2) is another device that can perform an amazing array of functions including the full authoring of a DAISY structured book.



**Figure 1 VictorReader Stream**  
Pictured above is the VictorReader Stream



**Figure 2 Plectalk Pocket**  
Pictured above is the Plectalk Pocket

The text is then converted to audio 'on the fly' by the device which has 'Text To Speech' or 'read aloud' capability using a synthetic voice. The service has evolved from the original phone based service.

### 6.1 i-access Pre History

From early 2004 Vision Australia has provided a phone based news service called Today's News Now (TNN). In this early version of the service, an electronic newspaper feed from the publishers (Fairfax and

News Ltd) was automatically converted into an access database which was accessible and searchable by phone. Library clients could phone in and select a newspaper and then a synthetic voice would read the paper or the article to the caller. The only technology needed was a telephone.

## **6.2 Online Device Trial**

In late 2005 the concept of downloadable accessible content was first trialled. One hundred clients used handheld devices called BookPort™ as part of the News On The Go Trial. A BookPort connects to a client's personal computer where they can download newspapers and magazines online through the i-access "News on the Go" service. This class of device also plays a range of other common file types like MP3, WAVE, Text, Braille, etc. The devices also act as personal recorders for audio notes.

This service did not involve any surfing of the internet. A desktop widget or portal provided the means of entering a client number and password. The underlying program would connect to the site and the desktop portal would report the number of items ready for download.

For the News On The Go (BookPort) trial, 85% were satisfied with the services and 91% responded that they would like to continue receiving the service. Comments about the BookPort and software were also provided. Further feedback was gained from volunteer coaches and staff involved in the trial.

## **6.3 First phase of online accessible news content**

In late 2006 VAILS launched the first model of a net based service with the 'News On The Go' (NOTG) – a download subscription service of national major newspapers. We began the service with 8 newspapers (and soon became 15) and a small number of users.

The service continued to require the user installation of a small program called the Downloader that listed a selection of fifteen newspapers. Typically the first time user would enter their registered name and password on a desktop widget and check boxes to establish their subscription choices. After this, each time the client wanted their daily newspapers, they would simply enter the name and password and click on the download button. As the download is only text, a significant amount of data can be downloaded on even very slow bandwidth.

Once downloaded, the paper is transferred to a device like the BookPort or Victor Stream, enabling the user full navigability of the DAISY structured newspaper. The user can go directly to a specific section, like sports and jump through the individual headlines until they find an article of interest. Amongst many other options, the Stream offers the ability to spell any word in the newspaper. The advantage of this service was that clients did not navigate the web or need to know anything about the internet. The desktop portal program or widget connected to a server and simply downloaded the content. In fact, there was no web site – just a direct connection to a server.

NOTG introduced a major advance with a bespoke automated mark-up system that receives the newspaper feeds every day, handles the metadata and tagging conversions into a mark-up protocol recognised by DAISY enabled devices all over the world. It is this "higher level indexing" that allows the

navigability features described above. This automated system generates content in both DAISY 2.02 and DAISY 3 standard.

NOTG was decommissioned in November 2007, having established a solid foundation for the current version of the service: i-access @ Online.

The i-access @ Online. service introduced a second way to access the content. It maintained the “desktop portal” previously available but now also included a web site where users could also make changes to their profile and subscriptions. The site also includes a revolving “juke box” of approximately 25 narrated DAISY books for download, as well as all our narrated DAISY formatted magazines. The site also offers a number of plain text and Braille books, not surprising as the devices loaned to clients also read Braille and plain text. As a library serving the print disability community, we have many Braille books on file.

### **6.4 September 2008**

The service had 28 newspapers in June 2008. Thanks to support from the two major Australian newspapers publishers the range of newspapers now includes 124 papers. These include all major Australian daily papers as well as many local, regional and country papers. This service will continue to grow as we are now receiving a number of magazines in text format.

The newspaper service includes newspapers from all capital cities in Australia, and boasts a significant growth in the range of community and regional papers. The service also includes text for a number of magazines. Due to the quick growth of content from NSW papers the site was redesigned. Over eighty papers are available and approximately 420 users are currently registered to use the service.

### **6.5 From March 2010**

Today we have approximately 124 newspapers on the site. Another service redesign now allows the user to download using a hyperlink, thus avoiding the need to install the Windows downloader program. As a result users of Mac computers are now able to use the service and it is accessible on mobile devices. This small newspaper service currently generates about 4,000 loans power month.

As with newspapers, the site now includes a larger range of books which are divided into genre e.g. Romance, Crime, Children, Young Adult and so on, instead of being in one long list. The number of books that can be downloaded in one session has been increased from 1 to 3. A podcast page has been introduced which contains podcasts from a range of VA radio shows.

Magazines are also divided into genre groups, along with Christian Blind Mission (CBM), Children’s and Community Languages. The most exciting thing about the new magazine and podcast pages is that clients will be able to subscribe to a magazine title just as with newspapers. This means that a new edition of a subscribed title will automatically appear in a clients download queue.

We have added a Braille Music page. We offer an increasing selection of electronic Braille music files (BRF) for download. These files can be chosen by selecting a category e.g. Piano Music, Brass, Vocal, Popular etc and then selecting a title.

With the new version of the downloader clients are now able to pause and resume downloads and there have been slight improvements in the speed of downloads as well. When downloaded, newspapers will now appear in individual folders allowing a greater range of devices and software to more easily access individual titles. When downloads are completed, an alert sound now plays. Many of these improvements are incremental developments that are welcomed by regular users of the service.

The web site itself has been subjected to extensive testing to achieve an optimum combination of accessibility, usability and security. The simplicity of page layout is based on universal design principles promoting clear navigation.

Users are able to use the service with a range of devices. Some possess their own specialist devices like the Freedom Scientific range of devices called Pac Mate ([http://www.freedomscientific.com/fs\\_products/PACmate2.asp](http://www.freedomscientific.com/fs_products/PACmate2.asp)). These are essentially sophisticated Windows PC based devices with a keyboard and Braille display that can perform a multitude of functions including accessing DAISY content. The full version of FSReader comes with JAWS 11 and can be used to navigate DAISY newspapers and print magazines. The full version of FSReader can be downloaded from [www.freedomscientific.com](http://www.freedomscientific.com)

## **7.THE FUTURE:**

i-access ® Online will be redeveloped into a new web interface for the entire range of library services and include all the functionality and services one would expect in a modern online service. As well as books, magazines and newspapers, the catalogue search screen will also search over 32,000 online periodicals available via the consortia arrangement (Gulliver) with other Victorian public libraries. Clients with devices such as a VictorReader Stream, Plectalk Pocket, or any one of an ever growing range of software readers will tap into this existing information service making the content available in a more portable, accessible and flexible manner. We have a growing DAISY audio book collection that will become downloadable when the new web interface is able to connect to these holdings.

According to research conducted in 2002 by Market Equity<sup>4</sup>, an estimated 4 million Australians are affected by a print disability or a condition that inhibits their ability to read standard print. Lack of access to information is the main barrier to their full participation in society. It prohibits them from getting employment, it prevents them from study, and it makes them isolated because they are unable to engage socially with those around them. As our population ages, so too will the need for greater access to alternative formats other than print.

Being able to choose the latest Harry Potter novel, to having a recipe or a train timetable, access to information is a pillar to social inclusion and the most basic of human rights. This project is vital because

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<sup>4</sup> (Source: Market Equity Secondary Research, 2002).

people who have a print disability are already significantly disadvantaged when compared to their sighted colleagues, and unless they can keep pace with new technology, they could slip even further behind when it comes to the right of access to information.

## **8.BENEFITS OF THE SERVICE**

As mentioned earlier, only 3-5% of all published information is available in alternative formats, and blind and vision-impaired people say that the biggest barrier to greater independent participation in society is a lack of accessible information. Through the smart use of technology, VA can implement an information access solution that will exponentially increase the amount of information available to clients and directly impact on their day-to-day living needs. This solution will provide clients with a personalised choice of information, how they access it and how they receive it.

VAALS is uniquely designed for the print disability community; no other service of its kind exists in Australia. The model we are developing links with existing information sources like the consortium database arrangements involving Victorian and Australian and international libraries, internet based sources, and daily, regional and community newspapers. The model will be of relevance to a significant and growing client base.

One day all information will be accessible to all from the moment it is produced. Until then, we need flexible options like the services described. The solutions we are implementing will see Vision Australia as a significant gateway to information, and one of the many possible providers of information, helping library clients to become more independent. It is not just about books, it's about living. It is about empowerment and quality of life.

## **9. APPENDIX 1: IMPLEMENTATION CHALLENGES**

### **9.1 ICT Challenges**

- Convincing manufacturers to introduce specific enhancements such a:
  - Menu layout modified to suit Australian 'logic' (Plextor)
  - Voice prompts on the player customized to suit Australian English
- Developing methods with manufacturers for field upgrades of firmware to clients across the country
- Licensing and customising voice technology for audio titles generated from text using Australian voice Synthetic Voice Technology (SVT) preferred by clients
- Software-enforced Digital Rights Management not yet built
- Training of technical staff and client support staff
- Development of inventory of parts and new test equipment, procedures and skills required
- Balancing repair of existing cassette players while ensuring immediate turnaround of repaired DAISY players (resulting in streamlining procedures)
- One device supplier (APH) pulled out of the handheld player market before alternative was available
- Streamlining of procedures required cooperation between departments – e.g. mail room to check players, send to repair only if broken (based on checklist)
- Development of different levels of documentation for clients and of cheat-sheets and checklists for VA support staff
- Managing client waiting lists
- First shipment of new model of player required on-site rework before distribution to clients
- Quality of overseas analogue to digital conversion was lacking; needed redoing
- Mass storage upgrade delayed by Kooyong power limitations

### **9.2 Communication**

- Dealing with Japanese culture and language differences presented - learning to ask the same question three ways to ensure clarity)
- i-access ® players and systems needed to be properly and consistently branded
- Consistency of administering procedures and communication to all VAILS staff not always followed
- Maintaining awareness of project changes across the organisation with over 1,000 staff in 40 offices spread across Australia
- Several key personnel changes during long program cycle

### **9.3 Other**

- More library clients were provided with DAISY Players than planned for in original business case estimates
- Other internal projects diverted energy from primary i-access ® goals
- Impact of the Global Financial Crisis on projects and sensitivity to currency fluctuations esp. \$US
- Copyright regulations are complex and provide ongoing challenges for content producers catering to the needs of the print disabled community