WEBDRAGON

Disability Care and Support

Submission to Australian Government Productivity Commission

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Digital divide

One of the major issues dawning on society over the past decade is the so-called *digital divide*, between those with access to technology and those without. Such technology includes a computer with internet access, and therefore access to the growing number of services offered exclusively online by governments and other service providers, including those that target people with disabilities and their carers.

Typically this digital divide is drawn along characteristic lines:

- those who can afford new technology vs. those who cannot
- those in major regional or metropolitan centres vs. those outside
- those who have grown up using technology or used it in their working lives vs. those who have not.

In respect of the first two, current Australian Government initiatives such as the proposed National Broadband Network are working to alleviate the costs of high-speed internet connections outside metropolitan centres.

One of the key dividing lines which is seldom acknowledged is that of those in the community with a disability and their carers vs. those without a disability.[1]

Digital barriers to people with disabilities

The initial cost of computing equipment and an internet connection are high for many members of the community. For those living with disabilities, extra *assistive technologies* are required to make generic computing equipment usable, further adding to these costs.

For example, people who are blind use software which reads aloud the text and elements presented on screen or outputs it to a refreshable Braille display. For people with motor skill impairments, specialised input devices are required in place of a traditional keyboard and/or mouse, including joysticks and eye-tracking devices.

On top of this, many of the assistive technologies, which render computing equipment usable to people with disabilities, are themselves prohibitively expensive, well in excess of the cost of a computer.

As an example, the *JAWS* screen-reader software by Freedom Scientific, seen by many as the industry standard for people who are blind or who have low vision, retails in excess of

[1] http://www.hreoc.gov.au/disability_rights/inquiries/ecom/bridges.htm (viewed 16 June 2010)

AU$1,000 for every new release[2]. This is obviously well outside the price range of many users, and puts a significant burden on public facilities such as libraries which aim to provide such software to the public.

The costs of assistive technologies add significantly to the digital divide between the general community and people with disabilities.

Online barriers to people with disabilities

One of the major uses of computers today is the internet, where governments and other service providers deliver an increasing number of services that are either reduced or not available offline.

Often these services that are available online are not usable by people who take advantage of assistive technologies such as screen readers. Such services are effectively not *accessible* to people with disabilities.

This inaccessibility is despite the existence of federal and state legislation[3] regarding anti-discrimination and equal opportunities, and the guidelines specific to government entities regarding web accessibility compliance, which would make the services usable. These laws and guidelines are designed to enforce international best practices: the Web Content Accessibility Guidelines (WCAG) as produced by the World Wide Web Consortium (W3C).

The United Nations estimates that globally fewer than three per cent of websites[4] are in compliance with these guidelines. Depending on a person's disabilities, this lack of accessibility can make many online services completely unusable, and adds to the digital divide.

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[2] http://www.freedomscientific.com/products/fs/jaws-product-page.asp (viewed 16 June 2010)

[3] For example, Commonwealth *Disability Discrimination Act*

[4] http://news.bbc.co.uk/2/hi/technology/6210068.stm (viewed 16 June 2010)

Overcoming the digital divide

Given the problems outlined above, there are two main areas that need to be addressed in order to overcome the digital divide for people with disabilities and their carers: the affordability of assistive technologies; and the accessibility of online services.

Affordable assistive technologies

In the broader software development community, the past ten years have seen a dramatic increase in the popularity of open source software, available at little or no cost to end users. Notable examples include the Mozilla Firefox web browser and the numerous variants of the Linux operating system.

The past few years has also seen the emergence of open source assistive technologies such as NVDA (non-visual desktop access), a free alternative to screen-reading software such as JAWS.

The project was initially started as a hobby by two blind software developers in Australia, and has since grown into a worldwide force supported by large software companies such as Microsoft, Yahoo! and Adobe, providing a free tool that improves the lives of thousands of users.

This project is an excellent example of what can be achieved for and by people with a disability through the passion and dedication of users themselves, when given appropriate support.

Assistive technology solutions

The affordability of assistive technology is an area where the various mechanisms of each level of government should work together to assist software development hobbyists and professionals alike to deliver software that specifically benefits the community.

This can be achieved through programs such as up-front research and development grants for specific categories of software and hardware development that specifically relate to tools that benefit people with disabilities.

Currently the Australian Government offers retroactive research and development grants to software development companies via the Research and Development Tax Concession through AusIndustry. Such grants are difficult to access for small companies that are yet to enter their first year of software development, as large costs must be incurred before they can be recouped. This is especially true of small companies developing assistive technologies that target users with disabilities, where, for the reasons above, potential revenue to offset research and development expenditure is significantly lower.

Webdragon recommends that a dedicated program be established for companies developing solutions with socially beneficial objectives, particularly assistive technologies affecting people with disabilities and their carers. Such a program would allow these companies to claim upfront research and development credits from AusIndustry, with these funds to be devoted solely to the research and development costs of the software being developed.

Not only would such a program provide direct benefits for end users within Australia, it would also serve to further establish Australia's role in the information and communication technology (ICT) sector globally.

For end users, particularly of hardware devices with relatively fixed production costs, similar grants should be established or expanded to drastically reduce the costs of assistive hardware for individuals' needs, enabling those individuals to participate in modern society more fully.

Accessibility of online services

Even with the barrier of the cost of assistive technology behind us, online services still need to be accessible and usable for people using assistive technologies. The potential reasons why websites are not accessible are plentiful:

- the issue of accessibility has not been considered by the people responsible for the website
- the developers responsible for the website did not take accessibility into account, or did not have the skill to achieve it correctly
- there was no budget available for addressing accessibility.

All of these are valid reasons which are seen in industry on a regular basis. Many of these factors can be shown to be outweighed by the benefits to all users of an accessible website. However in reality, while people with a disability remain an invisible minority in the community, there is no single obvious solution for significantly increasing the number of websites that meet accessibility standards.

Web accessibility solutions

In order to overcome this, several paths are possible.

First, each level of government should establish stronger enforcement of accessibility guidelines, including the tying of funding for communications and service delivery to certain levels of accessibility, with minimal budgetary impact when taken into consideration at the beginning of a project.

Projects for web development undertaken on behalf any government department, office or non-government organisation connected to the Commonwealth Government, or any state, territory or local government, should be funded only where they include specific provisioning for accessibility auditing to a minimum AA-level under the Web Content Accessibility Guidelines. Such websites should be permitted to launch only when this web accessibility standard has been reached, following a successful external audit.

Such audits should be carried out under the supervision of the various human rights and equal opportunity commissions in each state (for state and local governments) or the Commonwealth commission (for territorial and national bodies). Such bodies already possess the legislative “sword” required to enforce such standards, in the form of various pieces of legislation, such as the Commonwealth *Disability Discrimination Act* and the Victorian *Equal Opportunity Act*, as well as broader enablers such as the Victorian *Charter of Human Rights and Responsibilities* in the case of Victorian bodies.

Second, in the same way as Webdragon encourages Commonwealth Government bodies such as AusIndustry to directly fund innovation in assistive technologies, each level of government should offer explicit funding to not-for-profit organisations to validate and improve their compliance with web accessibility standards, to be supervised by state equal opportunity commissions. Such funding should be most directly offered to not-for-profit organisations which target and interact with people with disabilities and their carers.

While there would be some budgetary impact with the establishment of these grants in the short term, a nation-wide push towards efficient and accessible services online will result in less reliance on more expensive offline delivery per customer of the same services, with a concomitant overall reduction in expenditure over the medium term, alongside more positive outcomes for people with disabilities and their carers.

Beyond the digital divide

Through good policy and enforcement that benefits the entire community, it is possible for Australia to become a world leader in the improvement of access to technology by people with a disability and their carers, overcoming the cost and usage barriers that exist today.

Webdragon looks forward to the results of the Productivity Commission's project, and to seeing positive outcomes for people with a disability and their carers.

About Webdragon

Webdragon was formed in 2005 with a mission to deliver accessible and easy to use online solutions which contribute to client operational and marketing objectives.

During the past four years, Webdragon has significantly grown in capacity. Today it is established as one of the leading e-Business solution firms in Australia building and maintaining websites that are accessible to the entire community.

> “The team at Webdragon will provide you with high quality service. They will work closely with you to ensure that the deployment takes place smoothly, accurately and on time. The support we have received has been outstanding.”
>
> Greg Ure, Managing Director
> Caron Laboratories Pty Ltd

Webdragon specialises in providing web content management, e-Commerce, e-Marketing, graphic design, and managed IT infrastructure solutions to not-for-profit organizations and to clients in the corporate and government sector. By specialising in these key areas, we maximise the value provided to our clients though the combination of a high level of domain knowledge and the ability to implement proven technical solutions. Our solutions are first and foremost focused on enabling our clients to achieve their business objectives through the use of technology.

Webdragon has invested significantly in leading technologies to enhance its product and service range. These products enable our clients to benefit from easy to use and cost effective solutions that deliver a quick return on investment.