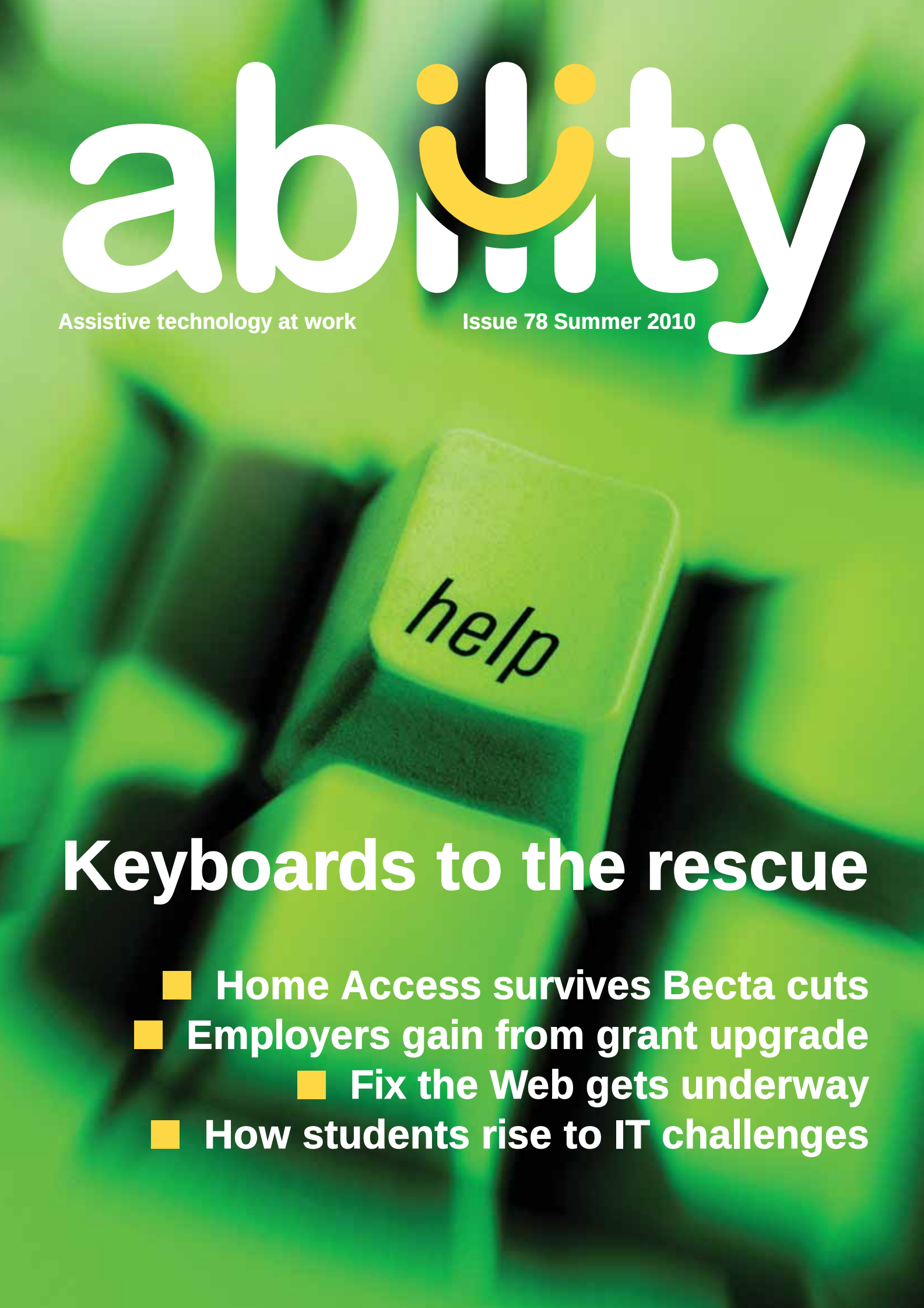
ability

Assistive technology at work

Issue 78 Summer 2010



Keyboards to the rescue

- Home Access survives Becta cuts
- Employers gain from grant upgrade
- Fix the Web gets underway
- How students rise to IT challenges

DOLPHIN
EasyReader

Try our NEW v5 Demo for FREE!

For a wider reading World

Read and listen to:

Project Gutenberg books, DAISY books, ePub, text, HTML & Google books

- Add bookmarks
- Listen
- Zoom in
- Highlight
- Search

Get it from: www.YourDolphin.com/EasyReader

ISSN 1352-7665

Contacts

Editor and publisher
John Lamb
john.lamb@abilitymagazine.org.uk

Production Editor
Mandie Beckley
mandie.beckley@abilitymagazine.org.uk

Contributors
Dr Gail Bradbrook
Debbie Brixey
Kevin Carey
EA Draffen
Janet Duchesne
Jane Fletcher
Guido Gybels
Paul Jarman
Val Shawcross

Published by
John Lamb Media Ltd
Pellingbrook House
Lewes Road
Scaynes Hill
Haywards Heath
West Sussex RH17 7NG
Tel: 01444 831226

Printed by
Micropress
27 Norwich Road
Halesworth
Suffolk IP19 8BX

Ability is grateful for the support of the following sponsors:

ability

John Lamb looks at why the QWERTY keyboard has been so long-lived

A Victorian invention that still rules the digital age

For all its emphasis on new things, technology often clings to some pretty old ideas. The standard QWERTY keyboard is one of them. It is astonishing that a device developed nearly 140 years ago, which is impossible for people without the right level of dexterity or visual acuity to use, should still be the standard way of entering data and commands into a computer.

Designed in 1873 to prevent the keys on a mechanical typewriter from clashing, the QWERTY keyboard is the great survivor. The inventor of the typewriter, Christopher Shole, redesigned his original alphabetical keyboard so that the most used keys were furthest from one another, to prevent them from jamming.

There have been efforts to improve on Shole's design. In the 1930s, August Dvorak came up with an alternative layout that uses less finger motion and hence puts less stress on a typist's hands. Dvorak claimed his keyboard resulted in increased typing rates and reduced typing errors.

However, although Dvorak's key layout is today incorporated into most computer operating systems, it never really caught on. The US government, in a damning 1950s report, concluded the cost of retraining typists and buying new keyboards outweighed potential efficiency gains.

Early on the QWERTY keyboard also began to come under fire for ergonomic reasons. Researchers claimed that the layout meant that the weaker ring and little fingers were overworked.

In 1926, EA Klockenberg described how the keyboard layout required the typist to assume body postures that were "unnatural, uncomfortable and fatiguing". He suggested that the keyboard be divided into two halves (one half for each hand) and that the halves should slope sideways to reduce the muscle tension in the shoulders and arms.

It wasn't until the veteran UK entrepreneur Stephen Hobday teamed up with typing expert Lillian Malt that the keyboard got a serious revamp. Hobday's standard three dimensional Maltron keyboard, produced in the 1970s, has a cup shape for the hands, an outward slant and a key layout that brings a typist's thumbs into play.

Alternative forms of keyboard followed thick and fast: one handed keyboards, chord keyboards that involve pressing several keys at once, keyboards controlled by head pointers and touch screen keyboards.

Software developers began adapting their operating systems to allow users to get round the hurdle of having to press several keys at once, while onscreen keyboards allowed users to select characters using a switch or an eye gaze system.

Many people hoped that voice recognition would do away with the need for keyboards altogether, but that has not happened yet.

It would be nice to get out of the Victorian era and into a world in which users are free to control a machine simply by speaking, but we are going to have to stick with QWERTY for a good while yet. ■

How accessible is public transport?

Does reduced mobility make using public transport difficult for you? Do you ever struggle to board Tubes, buses or trains or are you forced to make complicated journeys to get to a 'step-free' station?

If so, the London Assembly Transport Committee would like to hear from you.

We are examining the experience of people with reduced mobility on the capital's transport network.

This includes people in wheelchairs, older people, and people with buggies and young children.

Our investigation will look at how accessible the network is at the moment – from journey planning through using each form of transport and the interchanges between them – and what improvements are needed.

To help our investigation, please share your experiences of this issue with us, by email: ross.jardine@london.gov.uk; phone 020 7983 4206; or write to London Assembly Transport Committee, PP10, FREEPOST LON15799, City Hall, The Queen's Walk, London, SE1 2BR.

We welcome views from people until the end of September. For more details about our investigation visit: www.london.gov.uk/assembly/transport-access

We look forward to hearing from you.

Val Shawcross
Chair
London Assembly Transport Committee

UCanDoIT is looking for home learners

UCanDoIT is a charity that teaches people with disabilities how to use computers on a one-to-one basis in their own homes.

Reaching people with disabilities has always been a challenge and to do so without using funds that could be used to provide tuition even more so. We find that, while social services and sensory impairment units refer people on to us, the turnover of staff in these departments often means we have to reintroduce ourselves on a regular basis.

UCanDoIT started in 1998 in the belief that the internet can change the lives of disabled people, bringing them a greater level of independence and combating social exclusion. Since then we have taught almost 3,500 people with over 80 different disabilities from all backgrounds and all age groups.

We now have over 70 tutors in the UK, a large percentage of them in Greater London where we originally started but also in the Home Counties, Wales, Birmingham and Devon. Many of our tutors are themselves disabled and some are former learners who have chosen to pass on their skills.

We have a dedicated Scottish charity primarily funded by the Big Lottery Fund's Supporting 21st Century Life. We have nine tutors, many with a background in teaching assistive technology, as well as funding for learners needing reconditioned computers and any software needed.

We have also won funding from the Westminster Foundation to extend our home training services to disabled people in Liverpool, Manchester and surrounding areas.

If you or anyone you know would like to apply to learn with UCanDoIT please contact enquiries@ucandoit.org.uk or call 020 7730 7766. Details can also be found on our website at www.ucandoit.org.uk

Debbie Brixey
Public Relations
UCanDoIT

Resources out of reach of vision impaired academics

We are living in an age where ever-increasing and cheaper possibilities in digitisation and imaging are steadily putting academic resources in higher education institutions further and further beyond the access capabilities of visually impaired students and academics.

We have already arrived at a situation wherein by far the majority of literary and historical resources now available on the internet and on e-learning environments are not accessible because they exist only in image format.

Witness the Google books project as the archetypal example of this. But where is the pressure upon organisations that generate this material to do something about this coming from?

The answer is that no-one is doing it, and why not? Because everyone knows that nothing can now be done. It's already all too late, so we concentrate instead on the same old same old.

Once you've put your project beyond the use of a certain group of individuals, that's it. There is no going back, nor any alternative on offer.

Visually-impaired academics are now many, many times worse off than they were 10 years ago, and the major digitisation projects of the future – such as the British Library's project to digitise all British newspapers – are slowly ensuring that the final nails are being hammered into the coffin.

And where are the voices concerning inequality of access being raised? Does anyone hear them, because I can't. The truth is that, like so much in disability culture, in the end we are only interested in changing what we know we can change, and as for the rest, heads are just buried in sand.

Many may object to what I've written, but, in the end, I ask a simple question: when the British Library project is finished, why can't I have the same access to the newspapers as my fellow historians? It's as simple as that.

Paul Jarman,
Disability Support Officer
Queen Mary, University of London

HAVE YOUR SAY

Ability **welcomes letters and articles on all issues relating to IT for disabled people in work, education and daily life.**

Contributions can be sent to the editor, John Lamb, at john.lamb@abilitymagazine.org.uk

Becta to go but will not be forgotten

The government will continue with the assistive technology element of the Home Access Programme set up by Becta, despite a decision to close the schools technology agency.

Supplier XMA was awarded a £24m contract in June to deliver equipment to children with profound physical impairments and special educational needs.

The programme is part of the £300m scheme to provide children from low income families with computers at home.

XMA and assistive technology company iansyst will provide up to 12,000 individually configured computer packages for children. Another company called Vangent will evaluate the needs of children.

Becta, which will be closed by the end of the year, is urging those who may be eligible to apply quickly.

The agency's departure will leave a gap. Becta runs a series of forums including one about technology for special educational needs coordinators in schools.

It also provides grants to organisations such as Ace Centre and AbilityNet for assessing and training people how to use communication aids. Becta is now compiling a register of those interested in taking on parts of its work.

"The announcement that Becta is to be scrapped as part of the Government's £6.2 billion of efficiency savings is a huge blow to disabled children in mainstream schools," says Steve Piper of online information site DotComUnity.

Staff were consoling themselves with the largely positive media comment on Becta's track record and at the fact that their former head of inclusion Chris Stevens was awarded an OBE for his work with the organisation.

Scarf wraps up speech difficulties

Student Calum Pringle from Dundee University has developed a novel subtitling scarf for people with difficult to understand speech.

A prototype of the scarf contains an iPhone which is used to display snippets of what the wearer says, enough to get the gist of their conversation.

Slurred speech is picked up by a microphone and passed to a laptop running DragonNaturally Speaking. There the speech is recognised and turned into text.

Scripts pare down the number of words so that only the key ones are displayed on the iPhone.

Pringle came up with the idea after seeing his mother, who has speech

dysarthria, struggle to talk to people who did not know her well.

"The display on the scarf allows you to understand what she is saying, see her body language and keep eye contact, preserving the intimacy of the exchange," he told *Ability*.

Now Pringle hopes to take his idea further and says that there has been a lot of interest from developers.

Briefs

Accessible recorder

Olympus has introduced a digital audio recorder with accessibility features that include the ability to handle Daisy talking books, voice recognition and voice guidance. The DM 5's 8 gigabit memory provides 2,000 hours of recording in a variety of formats. Tactile buttons and an intuitive style of operation are intended to make it easier for vision impaired people to use. Users can edit their files with Olympus Sonority sound editing softward, which is compatible with PCs and Macs.
www.olympus.co.uk

Bed turns into wheelchair

Electronics company Panasonic has developed a voice controlled robotic bed that turns into a wheelchair, at the command of its user. A section of the bed twists so its occupant is in a sitting position and automatically detaches itself. The combination bed and wheelchair, which looks like an aircraft seat, is designed for people who need a high level of independence. Users can also watch TV, connect to the internet, check home security cameras or make video calls from the bed.
www.panasonic.co.uk

Machine beats human lip readers

Researchers from the School of Computing Sciences at UEA have demonstrated that a lip speaking recognition system can outperform human lip-readers – scoring a recognition rate of 80%, compared with only 32% for human viewers on the same task. The scientists compared the performance of a machine-based lip-reading system with that of 19 human lip-readers.
www.uea.ac.uk/

Access to Work makes grants easier to get

Access to Work, the government programme that provides technology and support to disabled people, is to be reformed by the new administration.

Disabled job seekers will be able to apply for jobs in the knowledge that Access to Work funding will be available in advance.

At present, applicants have to be offered a job first before they can apply for a grant to help with assistive technology.

"This proposed change to Access to Work should give employers more confidence in recruiting disabled people, as well as giving disabled jobseekers more confidence when applying for work," says Susan Scott-Parker, chief executive of the Employers' Forum on Disability.

Some 31,740 individuals were helped through Access to Work during the eight month period between April 2009 and December 2009, according to the latest figures from the Department for Work and Pensions.

In the 12 months of the 2008 to 2009 financial year, 32,120 individuals received help.

There is a need for a "massive" employer awareness campaign on Access to Work, according to Caroline Ellis, joint deputy chief executive of the disability network RADAR. The programme should also be extended to cover people doing voluntary work, she says.

Technology groups feel the financial pinch

Research into assistive technology is coming under financial pressure, with several organisations cutting back on their activities.

The RNID has closed its technology department and transferred staff and responsibilities for technology to other departments.

The RNID's high profile head of technology Guido Gybels has left the organisation along with Luke Crossey, head of projects, Mike Spanner, head of engineering and James Hamlin, principal developer.

The work of the technology department has now been spread among three other directorates in RNID: information systems and knowledge management directorate (an internal service), the communications and technology directorate and the research, policy and government relations directorate.

"I don't know yet what I will be doing next," Gybels told *Ability*. "In the mean time, I am available worldwide for consultancy and contract work in the areas of software engineering, R&D work and ICT related policy and regulatory affairs."

The government closure of Becta (see p7), the education technology agency, will also result in the loss of an experienced team responsible for putting together several programmes for supporting disabled school pupils including the Home Access and Communication Aids programmes.

Other organisations that are under pressure include the Ace Centre, which has had to switch its focus from research into communication aids to focus more on consultancy in recent months.

"Cutting funding can't be a good thing for people who need help and advice with assistive technology," says Nigel Lewis, chief executive of AbilityNet.

Briefs

Game on for over 65s

Older people in London have been playing each other at computer games such as Mario Kart and Wii Tennis in a competition staged to persuade people over 65 to go online. Wimbledon beat Newham in the BT sponsored DigiOlympics, organised by Age UK. Over six million people in the older age group have never been online, according to Michelle Mitchell, charity director at Age UK.

www.btplc.com/inclusion/

Websites find unity

Two sites for people with learning disabilities – information service DotComUnity and social networking site Special Friends Online – have combined by setting up links to each other. Special Friends Online provides 24 hour moderated social networking, while DotComUnity gives users with the opportunity to find out about events and social activities taking place in their region and to leave comments about them.

www.dotcomunity.org.uk
www.specialfriendsonline.com

Signing citizens

National charity Citizens Advice has launched web pages that give advice in British Sign Language. The pages are aimed at over 250,000 BSL users and present five BSL films on common topics that have been designed for deaf people. Citizens Advice is also experimenting with web cameras for clients to access BSL fluent advisers. The organisation hopes to role out the service in the next few years.

www.citizensadvice.org.uk

Raising the standard for accessibility

The British Standards Institution is preparing guidance for UK managers on how to develop accessible web products.

A new standard for web accessibility called BS 8878 will be published before Christmas, following a public consultation on a draft version in June.

The standard has had a chequered passage to publication, but the latest draft has attracted little adverse reaction, judging from online feedback.

Comments on the website containing the draft version were confined to relatively minor quibbles, such as requests to include software tools in the standard, arguments that there should be specific references to education, and questions about whether elderly people should be mentioned separately from disabled people.

The latest draft is a second stab at guidelines for web owners. Work on an earlier version was stopped at the beginning of 2009 when the European Standards Agency (CEN) halted development of web standards in a bid to get common ones across Europe.

The ban was lifted after it became obvious that member states would not be able to 'harmonise' their standards.

The second draft has important differences to the first version. It covers personalisation techniques, acknowledges the movement towards mobile platforms, and has specific references to the Equalities Act.

To whom it may concern

The standard is intended for those who commission websites such as business owners, marketing managers and heads of IT rather than the technologists who build them.

Site owners urgently need an end-to-end guide to help them to ensure their products consider the needs of disabled and elderly people, says Jonathan Hassell, chair of IST/45, the committee that produced BS 8878, and head of audience experience and usability for future media and technology at the BBC.

Hassell regards the draft as a map for those who may not be accessibility specialists, but need an idea of what to consider when making a website accessible, taking into account the wide-ranging needs of disabled internet users.

"It takes you through the decisions you need to make to set your project up so it is a success: who is my audience and what level of support should I give? How ambitious shall I be in making this product available to everyone?"

Jonathan Hassell: BS 8878 chairman

BS 8878 is not intended to replace existing guidance, such as version 2.0 of the international Web Content Accessibility Guidelines (WCAG), says Hassell.

The guide covers all stages of the web production process, from initial requirements gathering, through selection of technologies and platforms, testing, launch and maintenance.

It refers not to websites but to web products, which include software applications delivered over the web as services – so-called cloud computing.

Each web product should have its own policy overseen by someone in each organisation who has responsibility for complying with the standard, says the draft.

Organisations that want to adopt the standard must define the purpose of their web products and their target audiences (disabled people must be part of the audience).

Justifying opting out

When organisations opt not to implement the most accessible solution they should be able to justify their decisions for choosing the lesser option.

They are asked to bear in mind the technology preferences of their target audiences. They may have old browsers, for example.

Website owners are asked to decide whether to treat their users as individuals or as part of a group.

Social networking sites such as elearning portals or staff intranets which people join and log in to as members may need an individual approach, while public sites may lump their users together as groups and provide a lower level service.

For public sites, keeping to guidelines such as the World Wide Web Consortium's Content Accessibility Guidelines may be enough.

However, more personal sites such as those to do with learning may have to adapt to members' needs providing tools that can be used to 'individualise' a product.

The standard gives text-resizing or 'speak this page' features as examples of tools. The document points out that traditional inclusive design may assume that the user has set their text size in the browser, or purchased and installed text-to-speech software on their computer.

But many disabled and elderly people do not have the understanding or skills to adjust browser settings or install software themselves, so might need facilities on the site to help them do this. ■

www.bsigroup.com

Talking set top boxes out this summer

This summer TV users will be able to buy Freeview set top boxes with text-to-speech software that talks to them.

Korean company Arion Technology will introduce the accessible boxes, aimed at blind and partially-sighted people, in August.

The software in the boxes, called Talk@TV, will read out the electronic programme guide and on-screen prompts. It was developed by UK firm Ocean Blue Software in collaboration with RNIB.

Owners will also be able to adjust the speed and verbosity of the voice, choose to enlarge or reduce font sizes and change background and text colours. A re-designed remote control will also be included.

Ocean Blue's Talk@TV will be available in different languages and dialects; the UK version supports both the Scottish Gaelic and Welsh language, for example.

The price of the set top boxes had not been set at the time of going to press, but they will be between £70 and £100, according to Laura Buck, Ocean Blue Software's marketing manager.

Phase two of the Talk@TV development will introduce voice activation technology to allow owners to talk back to their TV sets to chose channels and alter the volume. This will probably be available next year.

An online video demonstration of the Talk@TV technology is available at **http://tinyurl.com/y9tpvq9**

AbilityNet expands play project in Ireland

IT charity AbilityNet is looking to recruit 50 nursery schools in Northern Ireland to take part in a project to introduce disabled pre-school children to assistive technology.

AbilityNet is offering nursery teachers a package of support, equipment and training including a 'loan bank' of appropriate hardware and software.

At nursery school, children inadvertently learn the basics of reading and writing before they experience any formal classroom schooling.

However, children with disabilities are immediately at a disadvantage. Excluded from many activities, their ability to acquire new skills is restricted.

The technology will give the disabled children opportunities to play where normally they might be sidelined on account of their disabling condition.

The children will use a variety of technologies to control computer programs and battery operated toys including switches, trackballs and touch pads. The project also provides keyboards with key guards and high visibility keys.

The 50 schools will join 27 that have already taken part in IT at Play scheme in Northern Ireland and with the aid of funds from the Roald Dahl Foundation.

"Children learn the basics of writing by scribbling with crayons from a very early age, but children with disabilities, many of whom will depend on a computer for recording information and producing written work later on, rarely have equivalent access to computers for play and learning at this crucially formative age," says AbilityNet head of projects, Dianne Cockburn.

www.abilitynet.org.uk

The IT at Play scheme in action

Call centre guide from Ofcom

Ofcom, the communications watchdog, has published a good practice guide for call centres with practical tips for communicating with disabled customers.

The tips are based on advice Ofcom says it has received from disabled people and organisations representing them, following issues they have experienced with call centres.

Blind people have reported that call centre workers assume that callers can see, and are unable to divert from their scripts even when they know that the customer cannot do what they are asking, for example, to read a serial number.

Deaf people report that call centres regularly hang up when they call via the text relay service.

Hard of hearing people have told Ofcom that requests to speak more slowly are often ignored.

People who have learning disabilities or have suffered a head injury say they find menus and entering figures, such as their account number, difficult.

Ofcom has written to major telecoms providers, financial institutions, insurance and utility companies to encourage them to consider using the good practice guide.

The downloadable guide can be found at **http://www.ofcom.org.uk/files/2010/05/callcentres.pdf**

100% compatible

It takes skill and experience to find the right mix of technology, training and support to make IT totally accessible. AbilityNet's reward is knowing the people we help find life has got better in all sorts of ways, from meeting challenges at school to new work opportunities, or simply being able to communicate effectively and take more control of their lives.

Sharing knowledge

AbilityNet is a totally independent national charity, working directly with thousands of people every year to find accessible IT solutions, no matter what their age or disability. We know from practical experience what works and what doesn't, and the real problems people face. As a result we now help and support a wide variety of professionals who wish to extend their knowledge or solve difficult issues. For informed, impartial advice it makes sense to contact AbilityNet.

AbilityNet's one-stop shop includes free information and advice; individual assessments, installation, training and support; accessible IT kits for public access centres; courses, seminars and practical workshops; accessible web design and audit service; consultancy.

For further information please contact:
AbilityNet • PO Box 94
Warwick • CV34 5WS
*Tel: 01926 312847 • Fax: 01926 407425
(*Minicom accessible)
Email: enquiries@abilitynet.org.uk
http://www.abilitynet.org.uk
Charity no. 1067673

AbilityNet

Adapting Technology ▪ Changing Lives

LookTel aids vision impaired users

The ability of mobile phones to aid vision impaired users is set to take a major step forward this summer with the introduction of a service that provides a bundle of applications for a monthly fee over the web.

The service, called LookTel, will enable people using smartphones running the Windows Mobile operating system to access software that recognises images, reads out text, and allows helpers to locate users via the global positioning system (GPS).

LookTel, which will cost around £25 per month to rent, is scheduled for launch in the UK by Sight and Sound at the Sight Village exhibition in Birmingham on July 13.

Image recognition, developed by LookTel's parent company iVisit, is the key application and will allow blind people to identify nearby objects by pointing at them with their phone's camera.

LookTel's image recognition system accesses a library of images stored on a user's PC at home or on host machines run by other organisations and looks for images that match those it is picking up.

Once the 'artificial vision' system recognises an object, it reads out a text tag or plays a pre-recorded message. Libraries are built up by photographing objects from several angles and either keying in or speaking the tags

LookTel also incorporates a text reader allowing users to get access to print media.

The application, which is based on existing software from video conferencing company iVisit, has been under development by 200 blind and vision impaired people in the US for the past year.

In an exclusive demonstration of LookTel to *Ability*, the software identified different cans of soup and distinguished between various banknotes; reading out tags that had been keyed into a computer running remotely.

Recognition took place in a few seconds, although the software did have difficulty identifying items when crucial information was missing.

For example, when the system failed to see the figure on a £5 note it referred to it as both £5 and £10, until it got a proper reading.

"The customer-base we are going for is very demanding," admits Glenn Tookey, chief executive of Sight and Sound.

"The service is about providing an independent environment where blind people can integrate more into the world. Thousands of blind people will have access to LookTel in the UK."

LookTel is also designed to link blind users with sighted helpers, allowing them to talk to each other and share live video pictures from a smartphone camera. In this way a blind user who is lost can get directions and help in recognising objects.

The service uses Google Maps and smartphone GPS systems to locate the whereabouts of a user who is lost.

www.sightandsound.co.uk
www.looktel.com

Technology companies join employers' taskforce

Microsoft, SAP, Oracle and Logica are the latest IT companies to join the Employers' Forum on Disability's (EFD) Business Taskforce on Accessible Technology (BTAT).

They join suppliers Cisco Systems, BT and Accenture in the organisation set up to promote accessible systems among employers in the UK

BTAT has nearly 30 members, including a group of global ICT suppliers. The taskforce was set up to overcome the barriers that prevented companies from recruiting and retaining employees, and from doing business with millions of disabled and older customers.

Susan Scott-Parker, chief executive of EFD, said: "We are delighted that four more major IT players have joined the taskforce. Their decision to participate is particularly significant because it reminds the ICT industry how important accessibility and usability really is." For example, 42% of people over 65, who hold most of a nation's wealth, have a disability.

BTAT members are now drafting the first corporate procurement specification designed to make it easier for both customer and supplier to ensure technology works more efficiently for everyone.

"I created BTAT in 2008 to be the collective voice of influence on the IT industry to deliver accessible and usable products and services for disabled employees and customers," says Steve Lamey, commissioner and director general, HM Revenue & Customs and co-chair of BTAT.

"The taskforce was set up to add value and not to be confrontational. It will bring together the best corporate customer and supplier knowledge in order to make accessibility and usability fundamental and to create a better environment for disabled people as employees, customers and citizens," Lamey says.

www.efd.org.uk

Above: Susan Scott-Parker
Below: Steve Lamey

Collaboration is the key to assisted living

Assisted living systems are not available to more disabled people because of official inaction and a lack of collaboration among organisations involved in developing and applying the technology.

The technology is mature, say experts who took part in a recent conference called Smart Living – The Way Forward for Disabled and Older People, organised by communications charity Phoneability.

Speakers argued that systems for monitoring people in their homes, delivering healthcare and improving the quality of life are on the market and do work.

Virtual wardens, energy management systems and systems for monitoring air quality were among other applications discussed at the conference, which was held in London.

However, speakers are frustrated that such systems are not in wider use. Participants underlined the potential of technology to cut the cost of caring for increasing numbers of disabled people.

Martyn Gilbert, chairman of OpenHub, compared the £5,000 annual cost of providing a community nurse for an individual with the £500 to £4,000 it cost to deliver a range of services electronically to that person.

He has identified 103 different types of service that can be delivered with the help of technology.

Dr Brian Collins, chief scientific advisor to the Department for Business, Innovation and Skills, said there was huge potential for the exploitation of web-based services and the delivery of information, providing it was integrated socially.

Collins acknowledged there was a debate in Whitehall about the trade off between people making available personal information about their habits and health and the wellbeing they might gain from doing so.

He detailed a wide variety of technologies that could help disabled people ranging from advanced GPS able to track individuals to within 10cms to vehicles that could respond automatically to the presence of disabled people by, for example, putting down a wheelchair ramp.

It was up to politicians to decide to spend the money on implementing assisted living, Collins told *Ability*.

"We are working in partnership with builders and healthcare providers on how to best develop a whole range of technologies around telecare and telehealth," said Peter Bonfield, head of the Building Research Establishment.

"We have to persuade government to invest in this. Government needs to get collaboration going because we need to integrate [the application of technology] across departments."

However, any specialist technologies in homes had to be configured for a general audience, argued Peter Ball, BRE's research director. Other contributors claimed advocates of assisted living had to overcome official inertia.

"I can't tell you how many meetings I have attended where there is a big dog on the block who says no," Gilbert told *Ability*.

"The old behaviours can't stay as they were. All you see is snippets in the UK. We have a collective duty to get off our backsides and do that collaboration."

Nonetheless, local authorities have implemented assistive living schemes. Kirkless Council, for example, has helped to develop a national digital television project called DigiTV to deliver information via interactive television and mobile phones to people who do not or cannot use computers.

"What's good design for the elderly and disabled is good design for us all," said Dr John Gill, who chaired the conference.

Researchers make smart homes smarter

A group at the University of Portsmouth has won a £128,000 grant to study ways of capturing more information about how we live in order to make smart homes more effective.

A team led by Dr Jim Briggs is working with Newbury-based Smart home technology firm PassivSystems to take some of the ideas to market.

It is important to ensure sensors can recognise the difference between someone falling over and someone having a nap, for example.

Eventually Dr Briggs hopes to use artificial intelligence to make the systems capable of 'learning' when to trigger an alarm and when to wait.

He sees two main customers for the new technology – statutory carers including councils; and those choosing telecare in their own homes.

Government ploughs £10m into research

The Technology Strategy Board is to invest up to £10 million in research that will help to underpin the development of new services for independent living.

The government body, which promotes technology for business, is looking to fund research into ways to encourage investment and implementation of the technology and studies of the interactions between assisted living technologies and those who rely on them.

"Understanding the market for such products is a key step towards meeting the needs of users and service providers, so we need models that show the potential impact of such technology, in order to demonstrate their social and economic value," says the Technology Strategy Board's chief executive Iain Grey.

Monkey business

Janet Duchesne injured her shoulder in Borneo. Here she describes how she coped with her recovery

The doctor's notes were quite interesting – and I am sure there were some chuckles when I went into surgery.

Instead of just having a shoulder injury to be repaired – I was the lady who was injured 'while chasing an orang-utan in Borneo'.

Not everyone spends two months as a volunteer looking after orang-utans in Borneo – and it more than made up for the painful months that followed that nasty fall.

And that is the point of this article.

The company I work for – The Speech Centre – provides enabling technology to overcome the problems caused by anything from visual impairment to RSI.

Suddenly I had a disability – albeit a temporary one – and it brought so much of what we do right into focus.

The inability to use an arm without experiencing pain soon had me working out coping strategies.

I mentally wrote my list of what I could and couldn't do – and what I would have to 'pay' if I did. Loading the dishwasher meant I would be in too much pain to get the washing out of the washing machine. Which was the most important?

All kinds of aids to help me

I was lucky enough, because of our profession, to be surrounded by aids at work. I could use speech recognition instead of typing; choose the mouse that caused least pain to my poor arm; work with a dictation machine instead of taking notes. Staff kindly ferried me to and from my workplace.

It did get me thinking however – of all those people out there who do suffer a temporary disability and how they cope.

If you know you are only going to have one arm for three months – you are not going to get special funding to bring in all the specialist software and training that will be redundant by the time you have mastered it.

Not to mention those people who have a more permanent disability but do not work or have access to any funding to make their lives any easier.

Coping strategies cost nothing. However, you need to be aware of how they work and make a conscious effort to sit down and list the things you can no longer do – and the things you can do but which then stop you doing anything else.

In my case I knew that the day I drove to work I would not be typing – or the day I emptied the dishwasher I would not do the washing.

Taking control

I drew up a timetable that spaced these activities across the week. Suddenly I was in control of my disability rather than letting it control me.

Fortunately I use – and train people to use – speech recognition. Therefore my typing alternative was already in place.

Dragon NaturallySpeaking Preferred does not allow you to completely remove the need for keyboard or mouse – but the minimal training involved can at least cover the text input side of things – which for some people is a large part of their job.

As for the mouse – here again I was lucky enough to be able to choose the one that caused least pain.

If that had not been the case at least I know there is a lovely piece of shareware available. Camera Mouse 2010 is a program that allows you to control the mouse pointer on a Windows computer just by moving your head – or waving any other object you have designated to be your mouse pointer (in my case a ping pong ball on a straw).

Camera Mouse does require the use of a webcam – but it is less costly than a sophisticated mouse for a temporary fix. Visit cameramouse.org for more information. Camera Mouse 2010 is completely free.

We are lucky to be living in an evolving world where, whatever your disability or injury, there is a good chance someone will have invented something to help overcome the difficulties caused.

And if they haven't invented it already – they soon will. So, even if you investigated the market a year or two ago and found nothing suitable – check again regularly.

Whoever would have thought we would now be using good professional quality speech recognition on Mac. But we are.

My shoulder injury is nearly cured – and the problems it caused are fading fast. However, I will certainly be more respectful when speaking to anyone who has such a problem on a more long term basis.

Hopefully when I am looking after orphan elephants later this year I will manage to keep my feet more firmly on the ground! ■

Janet Duchesne is director in charge of the training arm at The Speech Centre.
www.speechcentre.co.uk

Lights, camera, action!

Jane Fletcher reports on a training initiative from Leonard Cheshire Disability to help more disabled people find work in the media

Few disabled people are getting a fair chance to work in the media. Less than 1% of professionals working in media have a disability, yet the national average for the UK population is 13%.

This shameful inequality has got to change, and that's why Leonard Cheshire Disability has launched Ability Media, with the support of the media industry.

Ability Media is an initiative to help more disabled people gain the qualifications they need to pursue a career in film, television, radio and online media.

The Ability Media Centre, based in the London Borough of Southwark, is purpose-built, state of the art and the only one of its kind in Britain.

It provides a range of courses suitable for everyone from complete novices to students with some experience.

At the centre, they can study for the formal qualifications needed for jobs within the media industry, undertake training programmes up to a level 3 (A-level equivalent) in interactive media, radio and video production as well as animation and music technology.

The centre also provides basic skills training, employment support, and work opportunities for its graduates.

By supporting more disabled people to forge a career in mainstream media, Leonard Cheshire Disability hopes to increase the positive influence that people with a disability will have in deciding how disability is portrayed.

Who can apply?

Ability Media courses are open to disabled and disadvantaged people, including people with physical and learning disabilities.

Courses are free to those over the age of 19 who are receiving benefits and not in full time employment, education or training.

Specially adapted equipment such as high visibility keyboards make learning accessible to as many students as possible. The Media Centre can cater for people's specific learning needs and it is fully accessible for those with physical disabilities.

The courses are conducted by a team of qualified media professionals with many years of experience in the business.

Music Technology courses on offer include the introductory award in music technology, which aims to develop a range of skills and attributes related to this field.

Beginners please

Another example of a course on offer is the Media Club – digital video and broadcast. This course is designed for beginners with little or no knowledge of television or video production; and is a taster course taking students through all aspects of creating a TV programme from pre-production to post production.

The 12 weeks of instruction provide essential knowledge of television and video systems, which every operator needs, including obtaining a credit.

Tina Okojie, 32, is a student at the Media Centre, who heard about the courses through her local job centre while seeking employment. She joined to study radio production levels one and two, and podcasting.

The courses are for 16 hours a week, giving Tina, a single mum, the chance to study part-time.

Tina says: "I've learnt how to plan and produce a radio recording and how to use studio and broadcast technology, but I've also been given opportunities to present on camera at the Ability Media International Awards, so there's loads of opportunities to get involved in other projects at the Media Centre."

Toluola Akindele, 29, heard about the Media Centre through Remploy, a disability support service.

He had recently moved to London from Torquay and was keen to take part in the media courses on offer as a way to break into the media industry.

Toluola, who has Sickle Cell Anaemia and learning difficulties, including dyslexia, studied the radio production courses levels one and two, as well as a business in course, which looked at the commercial side of working in the media.

Now he has completed the radio production courses, Toluola is planning to run a regular show on AM Radio, a new station soon to be launched, which will be recorded and broadcast over the internet from the Media Centre. ■

Jane Fletcher is director of innovative projects at Leonard Cheshire Disability

www.abilitymedia.org

Shaw Trust
Ability at work

Web Accessibility Accreditation Services

Shaw Trust brings together the highest standards in technical auditing together with a comprehensive disabled user testing programme to offer robust audit, consultancy and accreditation services from the full audit, through to template and user testing, to training for web developers and authors.

We offer 2 accreditation levels – Accessible (AA standard) and Accessible + (almost AAA standard). We test in line with Web Content Accessibility Guidelines (WCAG) version 2.0, and have gained the BS EN:13407 ISO accreditation for Human Centred Design Process for Interactive Systems to ensure the quality of our services. We offer the most comprehensive, informative accreditation service available, and work with you to find the best solutions for your website and intranet.

Our Web Accreditation process

We combine the best technical auditing with a comprehensive disabled user testing programme, delivering:

- A comprehensive technical audit of your website, using the highest standard of automated software
- Our in-house Technical Auditor will carry out a manual investigation into all identified areas of concern, followed by full user testing audit to ensure your site is accessible. It is well recognised that automated testing and technical auditing alone, will not pick up all non-compliances or highlight every inaccessible element of a website
- A comprehensive and easy to understand report and screen grabs, listing current issues and how to fix them
- Advice and guidance throughout the remedial process and re-testing of the website upon completion of remedial works
- Award of our prestigious web accessibility badge.

Shaw Trust Accessible | Shaw Trust Accessible +

"Meeting the team and watching them use our website was the most enlightening experience and really highlighted how easy it is to make a website more difficult to use, unnecessarily. We are now committed to building this into future developments to improve things for the future, and we will continue to work with Shaw Trust to ensure accessibility is at the heart of everything we do."

South Cambridgeshire District Council –
Brigitte Wilson, Web Services Officer

Why not find out more about Web Accessibility with Shaw Trust?

Contact: Cam Nicholl Call: 07973 234 489/0300 123 7005

Email: cam.nicholl@shaw-trust.org.uk Visit: www.webaccess4all.org.uk

INVESTOR IN PEOPLE

POSITIVE ABOUT DISABLED PEOPLE

Shaw Trust, Shaw House, Epsom Square, White Horse Business Park, Trowbridge, Wiltshire BA14 0XJ
Support us online today **www.shaw-trust.org.uk**
This information can be obtained in alternative formats, please call 01225 716 354 and state your requirements.
A Company Limited by Guarantee | Registered in England No. 1744121 | Registered Charity No. 287785

Wanted: geeks with goodwill

Dr Gail Bradbrook of Citizens Online wants to persuade thousands of volunteers to report and put right problems with web accessibility. Here she explains the thinking behind her Fix the Web project

Despite efforts to boost web accessibility, the majority of websites present major hurdles to disabled people. Progress in improving the situation has moved at a snail's pace. For example, in 2006 the European Commission set out to achieve 100% web accessibility among public sector sites by 2010. After three years campaigning, the proportion of accessible sites in Europe's public sector had risen from 3% to 5%, a pitiful result.

Fix the Web is an initiative to create a web-enabled mechanism in which disabled people can report an e-accessibility issue that they have with a website and get it put right.

Gail Bradbrook: founder of the Fix the Web project

The project will rely on thousands of volunteers to receive complaints and to take them up with website owners.

When I was working on a contract for the European Commission some years ago it struck me that the approaches to e-accessibility are very top down.

European directives focus on standards, on attempts to improve training and agreements on targets such as the EC's 100% accessibility by 2010 objective.

Although there is clearly some need for top down approaches they don't appear to be working very well. Indeed, RNIB chair and *Ability* columnist Kevin Carey has highlighted the problems and suggested solutions in his response to the Digital Britain report published last year.

What I ask myself and others is "Can the effect of grass roots networks, in the Web 2.0 age, have an impact on e-accessibility?" The answer must be yes.

My entry into the world of digital inclusion was on a project to match those with technology skills to community and voluntary sector organisations needing help. It was based in Manchester and it was called The Dot.

It was a great idea and an innovation at the time, 10 years ago. The project did, however, somewhat over engineer the IT mechanics through a whopping great Oracle database.

We learnt some lessons from that and when I helped establish IT for Communities (IT4C) we were able to focus on the details of managing volunteers and matching what can be culturally quite different people and organisations.

IT for Communities

IT4C is now highly successful with over 6000 volunteers registered and £4million-worth of value delivered to the charity sector. However, 60% of registered volunteers are programmers and they are generally inactive, presumably because the volunteering opportunities of IT4C don't quite fit their skill set.

I see 'techie' volunteers as a huge untapped resource for addressing e-accessibility, for a few reasons. Firstly the number of geeks with goodwill is huge.

Amongst the geekery of the UK I notice a tremendous amount of desire to put skills to good use and a belief that code can be cool and can benefit society.

Those who don't understand the issues of e-accessibility will be horrified, I think, to learn that the web they love so much is excluding so many people. We can tap into this energy; there are many waiting to give their time.

There are leading lights like web developer Christian

Heilmann who have put together 'hack' days that help to solve some of the accessibility issues that dog the web.

My first ideas about Fix the Web arose from asking two other questions: "What is the real experience of a disabled user of websites and what are the key issues?"

My conversations with various stakeholders are showing that even experts do not have a full picture of what troubles different disabled people have. Clearly it is a very individual thing, based on personal circumstances and preferences.

But the collective impact is huge. For example, visually impaired users reported losing, on average, 30.4% of their time due to web access issues, according to a study of 100 blind users published in the *International Journal of Human Computer Interaction*.

Web fixing tools already exist. Damon Rose from *BBC Ouch!* brought Web Visum to my attention, a tool for visually impaired people, often used to deal with inaccessible captchas, but which also has the ability to create fixes to a website.

A person can use Web Visum to tag an untagged picture on a website so that the next person who looks at the site, through Web Visum, will see the fix in place.

A tool from IBM called WAT does this and more for a range of disabilities, although it appears to be shelved at the moment. These tools will clearly need a scale of usage and potentially, I guess, some volunteers to do some of the work.

Some aspects of web fixing through tools may be difficult for a disabled person to undertake (if you can't see the picture to tag it for example).

But I feel strongly that this isn't a problem disabled people should have to own and solve. Why should a disabled person go round creating fixes for other people's ignorance?

It's time a cadre of volunteers took charge of the issue and made it their own, I don't think we want to leave disabled people fighting their corner yet again.

Benefits for volunteers

Volunteering for web fixing work can have huge benefits too. This feel-good factor work can conveniently take place on-line and in a person's own time. There is the potential to create a grass roots change, when an increasing number of techies understand the details of e-accessibility.

What will these volunteers do? The main idea is to get hold of or create a web fixing tool along the lines of Web Visum or IBM's WAT and use marketing and a matching process to develop a network of people reporting issues and a further network for those involved in solving issues.

The reporting of problems to website owners is an essential, simultaneous process, even if you are creating patch fixes, the web owner is likely to create new pages and could repeat mistakes.

Fundamentally, we do not wish to send out the message that slip-shod approaches to e-accessibility are OK because someone will be retro-fixing them later.

At first I saw the web fixing tool as 'the cake' of this project and the reporting to web owners as 'the icing'. I'm starting to think the two should be reversed.

Research by the Disability Rights Commission showed that 45% of the issues raised by disabled users were not a violation of an earlier standard on web accessibility. It's clear in the sector that disabled user testing is an essential part of reviewing website accessibility.

How can we do such testing on the scale that is needed? Surely the answer is that that testing takes place on a daily basis by an enormous number of frustrated online disabled people!

When Digital Champion Martha Lane Fox went to lobby David Blunkett he said that some websites are so frustrating that he wishes he could just cut and paste the address and get someone else to sort it out.

Reporting issues to a web owner is more involved than that. Can someone else take the strain? My current thinking is that we could create a desktop application for a disabled person to very quickly record a website issue.

This would then be logged with a volunteer database and a volunteer would take charge of the issue, working with the website owner to communicate and address the problem.

Volunteers may need some mentoring from those who specialise in web accessibility and the process is likely to put more work their way. Web fixing tools may be built in, but they aren't essential.

What of the future?

How to take this forward? I am currently talking to about 50 people, who have different specialisms relating to this idea. There are techies waiting to code and people mentoring me on social media marketing, disabled people offering their time and e-access experts getting me up to speed.

Nominet Trust has put in some funding for my time, so I can drive this for the coming year. You could be involved too.

It's not about taking up huge amounts of your time. The following skills would be very helpful:

- Disabled people willing to start reporting issues
- Disabled experts willing to review potential tools
- People able to support PR and marketing by mailing their networks or covering the solution (once developed) in an article
- Techies willing to do some coding
- Techies willing to volunteer
- E-access experts willing to guide volunteers
- Volunteering experts willing to support process development
- Anyone with ideas and enthusiasm.

My next steps are to develop a roadmap to take us forwards and then probably work towards some hack or 'hot housing' days to build prototypes.

Vive la revolution! ■

Gail Bradbrook can be contacted at gail@citizensonline.org.uk, @fixthewebgail. Her blog is at http://fixtheweb.wordpress.com

www.concept-live.co.uk – e-Learning for assistive technology from Concept Northern

Who are Concept Northern?

Concept Northern have a proven record, with over 15 years of experience providing high quality assistive technology and training to persons with learning difficulties. Our clients have included major Scottish universities and councils, the NHS, the Ministry of Defence, the Inland Revenue, Access to Work and many other organisations.

Our aim is to keep ahead of the game; providing our clients with the latest technologies wherever possible. With this in mind we are pleased to announce the launch of www.concept-live.co.uk, our innovative new e-Learning website, professionally designed specifically for those with learning difficulties.

Who can use the website?

The website has been designed to train users with learning difficulties in assistive technology. Navigation is easy, courses are simple and easy to understand and feature interactive exercises that not only help users to learn their software, but also add a bit of fun. www.concept-live.co.uk is ideal for:

- *Users with a short attention span or mobility issues*
  Many users we train can only manage training in one-hour increments due to their learning difficulties. Use of our website will allow them to receive as much one-to-one training as they can manage and to train at their own pace, at their own preferred location.

- *Busy people*
  A busy schedule means many users struggle to take in all the information needed to successfully use their software. By using our website, users can learn at their own pace.

- *Those with rarely used software*
  On many occasions users don't use all the software provided straight away. A logon to www.concept-live.co.uk means they can study whenever they want and use the site as a refresher course.

- *Users with limited funds*
  A day's training on assistive technology can cost up to £400. When this is added to the cost of actually purchasing the assistive technology itself, it can be unaffordable for many people. A log on to www.concept-live.co.uk is a low cost alternative.

- *Disability advisors*
  Keeping up-to-date with new software and techniques is vital: www.concept-live.co.uk is provided free to advisors so they can learn specific software and receive updates about new technology.

What are the benefits of www.concept-live.co.uk?

The site and courses have many innovative features designed to make learning assistive technology as stress free as possible including:

- *Easy access to courses*
  Each course is categorised and easy to find. Within each course, sections are navigated to by using the Explorer panel.

- *Accessible website*
  The site will work with most screen readers and web browsing software. We have worked hard to achieve a perfect balance between appearance, interactivity and accessibility.

- *Examination*
  Students are examined in a test that is designed not to be failed! The exam is used as a memory aid tool – a great way to imprint important features of each course into a student's mind.

- *Certificate*
  This is perhaps the most important feature of the website. Many manufacturers have endorsed our training courses and provide a certificate verifying the users as a Certified User. On completion of a course and on passing the exam the student will receive a certificate – recognized by employers – verifying they can now use the software they have been trained on.

- *Interactive exercises*
  There are interactive exercises wherever possible in courses. These exercises are designed to help a user learn features of the product without simply reading course material.

- *Note taking facility*
  Many people with learning difficulties take notes as they go through training. The website has a note taking feature embedded in it so a student can 'jot down' notes as they go. When a student logs in to a course, he or she can edit or print out their notes.

Go to www.concept-live.co.uk to find out more or phone 01355 573173/email info@concept-live.co.uk

Get off the keyboard pain train

Get a Maltron

www.maltron-sales.com

Keyboard alternatives

Love them or hate them, keyboards are here to stay, but there are ways of making them easier to use

Keyboards are the commonest way of operating a computer and yet they remain one of the most problematic parts of the man machine interface.

The complex array of keys, which has changed little since the typewriter was invented in the Victorian era, have survived into the age of the touch screen, of gesture control and voice recognition.

People who either cannot see well or have little mobility in their hands are bound to struggle with a device that has 100 different keys, many with more than one function.

Millions of non-disabled people also find operating a conventional flat keyboard a painful experience.

"Repetitive strain injury is caused by the strain of turning your wrists sideways and holding your hands flat," says Stephen Hobday, founder of PCD Maltron, who has spent most of his long career developing alternative keyboards along ergonomic principles.

"I blame it on the technologists' reluctance to change. When I sent my designs to IBM they said they didn't fit with their commercial plans."

Nonetheless, the rapid increase of computer use has lead to a wide variety of alternative keyboard designs to give more people access to IT and to reduce the physical demands on the body.

Here we review some of the most common solutions.

Big letters

People with vision impairments can get a simple aid in the form of big characters for keytops.

These are available as cheap stick-on labels for individual keys, as so-called keyboard gloves or overlays, or built into complete keyboards.

Each character typically fills the keytop and is four times bigger than conventional lettering. Characters are available in various high contrast colour schemes, such as white on black, black on white and black on yellow.

Expanded keyboards

Expanded keyboards, which are larger than conventional ones, are designed to help users who are either physically or vision impaired.

The PCD Maltron unit measures 62cm by 23cm, making it at least a third bigger than a typical keyboard, and robust enough to withstand heavy use. It also has a built-in keyguard, and large characters on the keycaps, with different colours available for the letters and for the control keys.

Other features include extra space keys, a shift key which can be used with just one finger, and a facility to switch to a layout based on the most often used letters.

Keyguards

Computer users with dexterity and other motor skills difficulties can find keyguards useful. These are plastic or metal plates that fit over a keyboard, with a hole over each key.

The holes help guide a finger to the required key, and users can rest their hands on the guard without causing other keys to be pressed.

Maltron: providing finger friendly keyboards

Mini keyboards

Mini keyboards, based on laptop computer keyboard layouts, are aimed at users whose arm, hand or finger movement is restricted. Some might also be helpful for one-handed use.

Not all the units are designed specifically for people with disabilities. A typical mini keyboard is small enough to be used in a limited space, for example on a lap tray or wheelchair table.

Chording keyboards

Chording keyboards are smaller and have fewer keys, typically one for each finger and possibly the thumbs.

The CyKey, for example, consists of just nine keys that are used in different combinations to generate almost any character.

Instead of the usual sequential, one-at-a-time key presses,

chording requires simultaneous key presses for each character typed, similar to playing a musical chord on a piano.

One-handed keyboards

One-handed keyboards are useful in several different circumstances. Repetitive strain injury can affect one hand at a time, so a one-handed unit can rest one arm while it recovers.

People with restricted movement can find a compact one-handed unit helpful. Visually impaired people can type with one hand and use a Braille display with the other to read what they are typing, much as a sighted person might do.

There are different approaches to one-handed keyboards. For example PCD Maltron offers left-handed and right-handed concave units, designed to fit the hand.

The FrogPad is a compact keypad of 15 main keys, which between them provide all letters, punctuation marks and special characters.

A half-QWERTY keyboard can be used in the normal way or just by the left hand or right hand. The right hand, for example, uses just the keys on the right side of the unit: letters from the other half of the keyboard are generated by holding down the space bar.

The letters from the left side are in the same relative positions on the right side, and vice versa, helping people familiar with the standard keyboard layout.

One finger or stick control

People who have significant physical or movement difficulties can find keyboards designed specifically for operation by one finger or by a pointer stick held in the mouth or attached to the head.

These units have specially designed layout, shape and size to minimise the movement and pressure needed to operate them. The keyboards can handle the shift, control and alt keys and adjustable response and key repeat rates.

They variously offer mouse functions, an optional sound when a key is pressed, and large and brightly coloured keys (up to 31mm in diameter). Some offer a key layout based on the frequency of use.

Optional adjustable arms are available to hold the units in various positions. Typing can be speeded up for on-screen and other keyboards by software that predicts the intended word from the first couple of letters.

A variation on mouth stick and head pointers is a pointer from Zygo which attaches to the chin. Zygo says this reduces the head movement needed, because the pointer can be closer to the item being accessed. In addition it does not interrupt the user's field of vision or the full view of the user's face.

On-screen keyboards

Keyboards need not be physical units but can be displayed on a screen and operated by a laser pointer attached to the user's head, by a reflective dot on the forehead, or by a joystick, tracker ball, switches or other devices requiring minimal movement.

Users can point at required keys with a head pointer, or let a scanner highlight each key in turn until the one required one is shown. Typing can be speeded up for on-screen and other keyboards by software that predicts the intended word from the first couple of letters.

Windows options

Several facilities and options to help keyboard users with disabilities are included in Microsoft Windows computer operating systems. Sticky key facilities enable users to use the shift, control and alt keys with just one finger instead of having to hold one key down while pressing other keys.

Other options enable users to adjust the key repeat rate or get the computer to ignore keystrokes that are repeated quickly: this can help people with tremors, for example, whose fingers can bounce on keys when they press or release them.

Repetitive strain injury

The repetitive motion and awkward posture demanded by computer keyboards have been blamed on rising rates of repetitive strain injury.

Standard keyboard design forces operators to place their hands in a flat, palm down position called forearm pronation.

The compact, linear key arrangement also causes some typists to place their wrist in a position that is skewed towards the little fingers, called ulnar deviation. These awkward postures can result in discomfort and injury.

Manufacturers have taken various approaches to easing and curing repetitive strain injury caused by keyboard use.

These range from adaptations of conventional keyboards to PCD Maltron's radical design, aimed at fitting the shape of hands and the different lengths of fingers to reduce movement and tension.

Most efforts have focused on re-shaping the standard keyboard, or making it more adjustable, while keeping its basic shape and QWERTY key arrangement.

So for example, there are split keyboards, both fixed and adjustable, which form a tent shape such as the Goldtouch.

Vertical keyboards take the standard keyboard's key sections and place them upright. This 'hand-shake' position is considered the best posture for the forearms and hands. ■

Opportunity for all

At UBS, we are committed to developing diverse talent and ensuring disability is no obstacle to success.

It starts with you:
www.ubs.com/careers

Wealth Management | Global Asset Management | Investment Bank

You & Us

UBS

Catching up on the learning curve

With so many technology options open to disabled students it is hard to keep up. Researcher EA Draffen gives assessors and other professionals a heads up on the latest trends

EA Draffan of Southampton University has made detailed studies of the technology needs of disabled students

I am in awe of the vast array of online and social media tools students are using to collaborate and learn. However, there seems to be a widening gap between where students perceive themselves to be in this ever expanding group of technologies, and where we professionals seem to be.

Students are constantly collaborating and communicating online whether for social or study reasons, using social networking spaces such as Facebook along with instant messaging applications, blogs, wikis and forums.

Working with students from the University of Southampton, I have been given an invaluable insight into some of the strategies developed to overcome the accessibility issues that can arise from many different tasks related to studying at degree level on and off the internet.

What the students want

Ask students what they feel has changed about their technology use in the last few years and there is a solid opinion that they want immediate access to facts. They no longer expect to trawl the library for information or refer to a paper dictionary for definitions; they want information at their fingertips, 24/7.

The mobile phone also continues to be one of the main ways students access information and it's not just the iPhone: the Android and Nokia are equally popular. Students use mobile phones in a variety of ways both for learning and as communication devices, including the use of online calendars, e-texts, email and mobile versions of social networks such as Facebook.

In 2007, over 200 students from Kansas State University compiled a short web video to illustrate just how their learning is conducted online, reporting that they spend up to three and a half hours a day online. In an average year, they will access 2,300 web pages, 1,281 Facebook profiles and in just one semester, will write over 500 pages of email.

Students are keen to use software that suits their personal preferences – whether it is proprietary technology provided by the Disabled Students Allowance or the wide range of free and open source applications available over the internet.

Students make distinct digital decisions related to their use of programs and online services often based on ease of use and simplicity, from the use of eBooks, web tutorials and collaborative writing services such as Google Docs.

When looking at the range of technologies that could be classified as 'assistive', students are not just considering the access technologies such as screen readers and text-to-speech software but also those that allow for personalisation, productivity and those we have already mentioned as free, online and open source.

For the students of today, it is important that we try to take a more toolkit approach to assistive technology, evaluating the ways traditional technology can be integrated and complementary to free stuff available online.

No longer can we just recommend a particular laptop, mobile phone or iPad without assessing how it will integrate and support the wide range of technologies the student accesses for learning.

Getting to grips with tools

When the LexDis project at Southampton University evaluated the volume of assistive technologies available to students, productivity and free web tools far outnumbered the proprietary solutions, so it is imperative that those of us who are perhaps not such agile technology users get to grips with the tools students are now using.

It has always been important to ensure that technologies are personalised and tailored to the needs of each learner, but with

so many options available in the toolkit, this can be quite a daunting task.

Without knowledge of the many tools it can be very hard to make decisions, but it is possible to look at the tasks that need to be undertaken, the environment and the skills of the user and develop basic decision trees with a series of questions or even a matrix.

Justifying the choices made

This type of process may enable us to present some justification for the choices made and be a way of working with a student when reviewing the technologies available. It may also be possible to prioritise the features and functionality of each program and then score each on a 1-5 scale where 5 is a high level of importance.

For example, by scoring priorities such as more keyboard use over mouse use, or automatic generation of a hierarchical layout compared to a user designed web diagram it is possible to arrive at a best choice of programs. This sounds rather simplistic and of course is not a technique that works for all assistive technologies.

Although many of the access tools such as screen readers and text-to-speech applications offer ways of making working online with collaborative services easier, there remain issues with their compatibility with some of the features such as media players and rich text editors.

The navigation and ease-of-use of virtual learning environments and content management systems also continue to present a challenge to disabled students with numerous command buttons and tabs, endless lists of courses and documents without accurate search features or 'skip' navigation links.

When discussing with students their use of assistive technologies with online text editing it has become clear that not many use their specialist spell checkers. This seems to be because either they do not work with all edit fields or they take too long to load up or even the fact that they are not always available in labs or other public areas.

Apple Mac users are supported by the built-in spell checker even when online; however, Windows PC users have different spell checkers depending on the browser they use. Many students are unaware of this or the accuracy of the spell checker.

When three groups of students were asked how they spell checked text online, many admitted they did not or said that they used Microsoft Word with cut and paste. Only the Mac users were smiling and rarely was the use of recognised assistive technologies mentioned.

Testing the steps used to spell check by cutting and pasting, research by myself and Abi James of iansyst established this amounted to six further steps students had to go through to post a response or comment online.

This drawn out process wastes time and contradicts the immediacy and fast-paced nature of social media. Solutions can be found with browser toolbars but the error correction is not as accurate as specialist commercial spellcheckers: either off-line products such as Oribi Verity Spell, or online ones such as Ginger software.

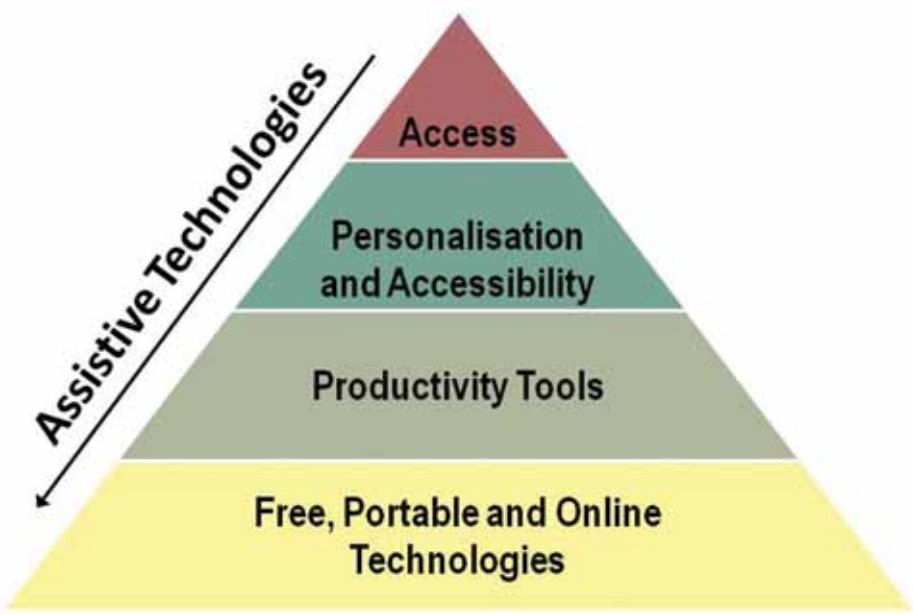
CAPTCHA – useful or not?

Some online collaboration and social networking services require registration with a CAPTCHA – these are not screen reader accessible but other options may be offered such as an audio CAPTCHA – although these can be pretty unintelligible as well.

There are also many other features that are inaccessible and these can make it impossible for some assistive technology users to join their peers in collaborative assignments, projects and networking without developing personalised strategies such as joining Webvisum to work through the CAPTCHA problem or using LiveWriter to post to a blog.

Our analysis of the ease of use and accessibility of a range of collaborative on-line Web 2.0 applications and services is available at www.web2access.org.uk. The checks are in many cases very subjective, but they can act as a guide to those wishing to ensure a more inclusive teaching and learning environment.

There are areas where accessibility and quality control are definitely improving for free applications. The mobile version of Facebook, for example, is much more accessible to students as it removes many of



Access is just the tip of the ice berg when it comes to the type of techology disabled students use

the third-party applications and unnecessary navigation options.

The same applies to Accessible Twitter. In terms of blogs, we have found Wordpress to be the most accessible; however, LiveJournal is also very good. Students can activate privacy settings, change the colour of the text and background, and spell check their work using the built-in rich text editor.

With regards to wikis, to date, we have found that those run on Media wiki offer the most options for personalisation with embedded spell checking while the output works well with proprietary text-to-speech software.

As Web 3.0 is just around the corner, there is no time to pause in awareness of these interactive desktop applications that work seamlessly with the web. The assistive technology toolkit of 2010 has to embrace the agility of the technologically savvy student.

It needs to take account of the time constraints all disabled students face but acknowledge their skills and personal preferences.

Guidance to the options available

For those who are not so sure of their technology skills, there needs to be increased guidance related to the options for online, free and open source software.

However, it should be noted that in the excitement of finding new services and clever tools to help productivity, not all that is free and open source has the support and years of research and development that can be found with many of the well known assistive technologies.

Often, the support for free technologies comes from the developers – who may move on once they have completed their project to their satisfaction. When it comes to open source, it may depend on the degree of community that can be developed around the product that sustains and enhances its functionality.

Perhaps the key to keeping up to speed with the latest technologies that support students' needs is to work in a participatory way with them. By maintaining regular contact with the students we meet and, where possible, catching up with them throughout their studies, we can all become more digitally able to support the interactive learning experience that today's students have come to expect. ■

Over 130 Disabled Student Allowance (DSA) assessors, industry experts and technology suppliers met at Assess 2010 to discuss the latest trends. Hosted by iansyst, the two-day conference kicked off with a presentation – on which this article is based – from E.A. Draffan, Research Fellow from the University of Southampton. To hear more from delegates and suppliers, check out podcasts recorded live at Assess 2010 at **www.iansyst.co.uk/assess2010**

Clean audio

Technology could make TV more intelligible to people with hearing impairments, says Guido Gybels

Guido Gybels: broadcasters should drive the process forward

Many hard of hearing people are missing out on a lot of the enjoyment offered by television because they experience difficulty in distinguishing speech from background noise.

It has become a common feature of current television making to have almost continuous background sounds behind programmes. And yet simple changes to the way sound is delivered in digital broadcasts, providing so-called clean audio, could make a big difference.

Even minor hearing loss leads to a noticeable reduction in audibility or intelligibility of speech.

Hearing for high-pitched sounds is usually worse than for low-pitched sounds. This means that low-pitched sounds like traffic, fans and air conditioning or rumbling background effects and music are more likely to cover up the sounds of speech.

Also, the cochlea often no longer properly separates out the different components of sound. This means that speech and music may appear distorted, blurred or muffled, even when they are amplified.

Turning up the volume will not necessarily improve intelligibility and may even exacerbate the problem. The louder the background noise, the stronger intelligibility is affected.

With one in seven of the population in the UK affected by hearing loss, this is indeed a sizeable problem and there is plenty of evidence of the demand for clean audio.

For example, The BBC's *Points of View* programme typically tackles the background noise issue three or four times a year.

And when the BBC ran a short trial in which a clean audio sound track could be accessed by pressing the red button, many people contacted the BBC to ask for more such programmes.

An RNID members' survey confirmed that background noise on TV is a problem for the vast majority of them.

It is also worth mentioning that this is not a new problem, rather one that is longstanding and at least goes back to the time of the BBC Mathers report of the early 1990s.

The term clean audio refers to technical and procedural provisions to achieve clarity of speech for the maximum number of viewers, with particular focus on those with hearing loss.

As such, it is not a black box or instrument or rule, rather it covers the end-to-end creation, mixing, transmission, delivery and play-out of the audio component of television programmes.

There are different ways to achieve clean audio. Programme makers could, during production, design their audio with the specific requirement of clarity and intelligibility by people with hearing loss in mind.

Background sound could be delivered separately from foreground dialogue and speech in a way that allows the user to control tone and volume levels on both streams separately or even turn the background stream off altogether.

An alternative clean audio stream could be broadcast in parallel with the standard audio for a programme.

In practice, programme makers and broadcasters would always have the key role in achieving clean audio, although transmission systems and receiving consumer equipment would also have to be adapted to actively support such a solution.

Striving for an acceptable result

The concept of clean audio has been demonstrated through research undertaken by Salford University and RNID. In trials of one type of a clean audio solution, people with hearing loss found that watching television was more enjoyable and intelligible, while hearing family members also found the results acceptable.

A true solution cannot be implemented overnight, and there is a need for awareness-raising, technical work on standards and metadata, policies on audio material for broadcasters and programme makers, and technical developments and implementations.

In the meantime, broadcasters should use their authority in standards bodies and professional markets to act as a catalyst and drive the clean audio process forward, coherently, sensibly and taking into account user requirements.

They should also issue guidance and advice to programme makers and other relevant parts of the end-to-end delivery chain over which they have control. ■

Disabled students to get streamlined grants

The Students Loan Company (SLA) has announced changes to the system for handling applications from disabled students for equipment and assistance.

The bid to speed up the process follows a shake-up at the top of the organisation after long delays in handling applications for the £100m Disabled Students Allowance last year.

The organisation has promised to reduce the time it takes to establish a student's entitlement to DSA from 20 to 10 days, while doctors are no longer required to explain the impact of a disability on a student's course.

Non-medical helpers such as technology trainers can be appointed on the say-so of assessment centres, which no longer have to produce two quotes for helpers.

This has caused disquiet among some support staff who believe it might cut down the choice available to students.

The SLC has also said it will no longer challenge all recommendations made by centres in their needs assessment reports, but will instead just audit a sample of reports.

Additional improvements promised by the SLC include staff training to boost the service they give disabled students and a doubling of the number of people handling the DSA from 24 to 47. ■

BeMyCareBroker.com

Ex-social worker Karen Garner (pictured right) has started an online marketplace designed to help care users spend their personal budgets.

The site, BeMyCareBroker.com, puts care users in touch with care companies selling products and services. Some 40,000 companies are listed on the site.

By next year all long-term care users should be allocated a personal budget from which to pay for their social care services.

Garner argues that ensuring that people's personal details are kept secure and that they receive good value for money will be extremely difficult.

Effective and secure IT systems will play a big part in reducing those risks to service users, she says.

"Properly managed, specialist online directory sites tailored to the very specific needs of service users will prove worth their weight in gold."

Users of the free BeMyCareBroker site are able to manage their personal finances, search for suppliers of care products and services in their area and access useful documents.

Local authorities will be able to put up their own microsites that allow users to fill in application forms and communicate with social workers.

"There are various stakeholders – users, local authorities and care companies – who all have to work together," says Garner. "We are there to fill that massive gap between them." ■

http://www.bemycareworker.com

Guides from NIACE

The National Institute of Adult Continuing Education (NIACE) has published two guides for people working with disabled learners: 'Teaching disabled learners' and 'Learning support for disabled learners'. "The documents have many uses, one of which was to support the development of a Level 5 specialist teaching qualification and a Level 3 Certificate in Learning Support (Disabled Learners)," says Viv Berkeley, Programme Director at NIACE. ■

www.niace.org.uk

Ergo4u provides forearm support

Ergonomics company Ergo4u Ltd has started selling a forearm support board that provides posture relief for desktop and laptop PC users.

The compact ergoCloud board, which connects to tables of any type, costs $170 including shipping through the website www.ergocloud.com.

Ergo4U says the arm board can help ease or prevent pain in PC users' hands, arms, neck, elbows, and shoulders and lower back.

A 2006 study by *The British Journal of Occupational and Environmental Medicine*, concluded that the use of large arm boards significantly reduces neck and shoulder pain as well as hand, wrist and forearm pain.

www.ergo4u.com

Code Factory launches free update for Geo 2.0

Code Factory, maker of the GPS navigation tool for blind people Mobile Geo 2.0, has introduced an update that allows users to refresh their maps and points of interest at no cost.

"It is very important to us to make sure that our users have access to the most accurate data so that they feel safe travelling with Mobile Geo," explains Eduard Sánchez, Code Factory's chief executive.

Mobile Geo is powered by the Sendero 2010 GPS system, but lacks some of the American product's features which, according to Code Factory, have been sacrificed in order to make the free upgrade available.

However, the new version of Mobile Geo has extra search options for post codes, new Google transit feeds and additional country maps, among other improvements.

www.codefactory.es

OmniRead's TintMy Screen test works out best settings

OmniRead has introduced a £10 on-line test called TintMy Screen, which is designed to allow computer users to optimise their screen settings.

The test involves reading back text in different font sizes, brightness levels and background colours. At the end of the test, users are given a list of settings that will suit them best.

"Often the computer screen is taken out of the box with its factory default settings, plugged in to the computer and used with very little regard for its settings and set-up," says OmniRead.

"This default, bright white background is acceptable to some but often not for the majority."

OminRead says the test is based on its "patented and extensive experience gained from working with people who have identified difficulties with reading".

A number of student assessment centres in the UK provide one-on-one TintMy Screen tests to students as part of their Disabled Student Allowance.

www.tintmyscreen.com

Widgit tools support use of symbols on websites

Widgit Software has developed two programs – Insite and Point – that allow website owners to add symbols to their pages.

Insite is a client/server application for users who are already familiar with using symbols to support text. The interface for the software sits within an organisation's existing content management system (CMS), blog or wiki.

It has all the basic formatting functions provided by a content editor, but with the added functionality of symbols. Users can symbolise their entire site, just apply symbols to part of it or to provide a summary of each page.

None of the symbols are stored on a user's servers, but kept instead on Widget's systems, which are updated every few hours, making maintenance easier.

Point – an AJAX service – enables website owners to help people who have difficulty understanding English to see symbol alternatives when they hover their pointer over a word.

When the hovering happens a request is sent to Widgit's servers that send back the appropriate symbols.

"Integrating Point into your website is a straightforward procedure," says Widgit. "There are two configuration files to edit, lines to add to your page header and a handful of client files to upload."

Widgit software is available in 14 languages and is used worldwide to create symbol-supported materials for use in print, onscreen and online.

Both Insite and Point cost from £282 per year.

www.widgit-online.com

Pocket alarm from Tunstall Healthcare

Tunstall Healthcare has launched CareAssist, a portable radio alarm that alerts carers to people who may need assistance.

CareAssist does not require a telephone line or monitoring centre service. This makes it suitable for dementia and respite care, as well as for people with learning disabilities and those in residential and care homes.

The alarm system can also help private individuals and their carers who may prefer not to be connected to a 24-hour monitoring centre service.

The pocket-sized alarm has a radio range of up to 200 metres (line of sight) and is compatible with Tunstall's smoke, flood and heat detectors, property exit sensor and bed/chair occupancy sensor.

Call history, including the time the alarm was received and the time it was answered, is held on the unit's memory and can be viewed on the alarm's screen or downloaded onto a PC for analysis.

CareAssist is being used by Hft, a national charity that supports people with learning disabilities, to help the people it looks after in registered care and supported living environments.

www.tunstallhealth.com

Online course to make travel more accessible

Accessible Travel Made Easy is a free online training course aimed at travel agents, tour operators and other front-line travel industry staff.

Devised by the Association of British Travel Agents with the Equality and Human Rights Commission, the course provides an overview of what is meant by inclusive or accessible travel.

The course follows a number of incidents in which disabled people have had difficulties with holidays or have been prevented from travelling altogether.

Staff get a guide that covers the whole customer journey and uses facts, quotes and case studies to help them understand how to identify a customer's needs.

www.accessibletravelmadeeasy.com

Researchers home in on RAatE conference

Researchers at Newcastle University are working on a kitchen that can monitor the activities of someone with dementia and help them stay safe while preparing food.

Hidden sensors in storage jars and kitchen scales record what food items someone is using, while pressure sensors on the floor track their movements. Monitors and sensors make sure there is no risk of flood or fire because the taps or the cooker have been left on.

Such ideas may be years in the lab before coming into the public eye, but the RAatE conference provides an annual opportunity to find out more about current developments.

Innovations that will be discussed at the conference range from fairly straightforward adaptations, such as developing a wheelchair that can be propelled by someone who has lost the use of one side of their body following a stroke, to very advanced technologies.

People who have had a stroke, for instance, can undertake rehabilitation exercises in their own home helped by examples and feedback provided through their PC.

Eye gaze technology allows people with minimal use of their hands or arms to use their eyes to control a computer or systems that open and close the curtains.

RAatE is the only UK conference focused on the latest innovations and developments in assistive technology, and provides a forum for academics, healthcare professionals, users and anyone with an interest in the area.

This year's conference will be on November 29 at the Warwick University conference centre near Coventry. The cost of the conference is £125 including VAT, with some student concessions.

www.raate.org.uk

TextHelp boosts Mac accessibility

TextHelp Systems has introduced an updated version of its Apple Mac-based text-to-speech software.

Read&Write 4 Gold for Mac is the UK's first text-to-speech software for the Mac to offer both screen masking and a screenshot reader.

"The popularity of the Apple iPhone and iTouch continues to drive a rising demand for Mac compatibility in education," says the company.

Aimed at those with learning difficulties, dyslexia or for whom English is a second language, the Read&Write 4 Gold for Mac software works with all mainstream Windows applications.

Read&Write 4 Gold for Mac acts as a concentration aid for students with learning disabilities such as dyslexia, basic whole screen masking enables them to tint their screen to block out text they are not reading. The program allows students to underline and highlight the area under the mouse pointer using a mouse spotlight tool.

Inaccessible text – such as 'locked' PDF documents – is speech-enabled, saving students time and money on printing, scanning, and editing information.

The tool also speech-enables inaccessible Flash files, which are frequently used by examination boards.

The software is stored and run through a USB pen drive and is provided with a recovery DVD should the student need to reinstall it on their Mac.

Licences cost £320 for a single user, £350 for a single mobile device with discounts for site licences.

www.texthelp.com

Sunshine gives a lift to wheelchair users

The world's first water-and-solar powered lift for wheelchairs was the centre piece of last month's London Festival of Architecture.

A prototype of the lift was used to carry wheelchair users up and down a flight of stairs on the historic Duke of York Steps outside the Institute of Contemporary Art in London.

Designed by Matthew Lloyd Architects, the lift is intended to raise public awareness of access and sustainability issues.

The zero-energy device, capable of carrying more than 500kg, uses water weights to counterbalance the lift cart. All the mechanical innards were on show, allowing everyone to see how it works.

www.matthewlloyd.co.uk

Free internet training by screenreader.net

Hundreds of blind and partially-sighted computer users around England will get a taste of what the internet can offer.

Free assistive software company Screenreader.net is running 50 free internet learning days for people with vision impairments at centres around the country.

The company won a grant from the Department for Business Innovation and Skills' Transformation Fund.

"We have had a tremendous response from local blind societies, UK online centres and Local Authorities who all have a strong desire to include those with little or no sight within informal learning," says the company.

www.screenreader.net

E-Access 10: Technology for All

13 July 2010, Olympia 2, London

The UK's leading conference on access to technology by people with disabilities is back, co-hosted by the OneVoice for Accessible IT Coalition and E-Access Bulletin with partners and supporters including Employers' Forum on Disability and *Ability* magazine.

Session topics include the future of accessibility, accessible e-learning, handling pdfs, mobile technology, electronic books and access to automatic teller machines. The conference will also feature case studies from leading UK companies and government bodies.

For more see:

www.headstar-events.com/eaccess10

OneVoice for Accessible ICT

ability

employers' forum on disability

e-access bulletin

For An Independent Life

Disability North DNEX Exhibition 2010

The Metro Radio Arena Newcastle 20th and 21st October 2010

The North's Largest Independent Living Event now celebrating its 20th year!

Information, equipment and advice for disabled and older people.

New for 2010: **Just for Kids!** a section dedicated to children and the also the new **'Smart Home'**
Over **150 Exhibitors**, including equipment suppliers, transport, support groups and leisure
Don't miss out on the fantastic **fashion show** by Percy Hedley Foundation's Adult Services
An exciting range of **free seminars**

Free Admission Free Parking Free Shuttle Bus from Arena Car Park

For further details please contact Disability North on:
Tel: 0191 284 0480 Fax: 0191 213 0910, **Text:** 18001 0191 284 0480, **Email:** events@disabilitynorth.org.uk
or visit www.disabilitynorth.org.uk

ability

Keep abreast of the latest developments in IT for disabled people: get *Ability* Magazine

2010 SUBSCRIPTION RATES FOR *ABILITY* MAGAZINE

There are two subscription options:

1. The institutional subscription comprises five copies of each print edition of *Ability* magazine per year and a licence to distribute an ebook edition (PDF and HTML versions supplied). The annual subscription fee is £160 (members of National Association of Disability Practitioners £144).

2. The personal subscription consists of either a print or ebook edition (PDF or HTML). The annual subscription fee is £60 (members of National Association of Disability Practitioners £54).

Name .....

Job Title .....

Organisation .....

Address .....

.....

Postcode .....

Telephone ..... **Email** .....

Signature ..... **Date** .....

I wish to take out (please tick as appropriate):

- ☐ An institutional subscription
- ☐ A personal ebook subscription (state whether PDF or HTML format is required)
- ☐ A personal print subscription
- ☐ I am a member of the NADP

Please send me an invoice made out to .....

.....

Address: *Ability* Magazine, John Lamb Media, Pellingbrook House, Lewes Road, Scaynes Hill, Haywards Heath RH17 7NG
Telephone: 01444 831226
Email: john.lamb@abilitymagazine.org.uk
Website: www.abilitymagazine.org.uk

Diary of events

E-ACCESS 10
13 July
Olympia 2 Conference Centre, London
Keynote speaker at this year's E-Access is Ed Vaizey, Minister for Culture, Communications and Creative Industries. The conference, with ***Ability*** magazine as media partner, is being staged in association with One Voice, the consortium of accessibility groups. The programme includes interactive sessions, workshops and case studies and with the opportunity to network.
Fees: Public sector £195, private sector £295, small charities and not-for-profit organisations £165. Add VAT to each price.
For further information: Call Elodie Robertson on 01883 344799; email at elodie@headstar-events.com or visit www.headstar-events.com

QUEEN ALEXANDRA COLLEGE SIGHT VILLAGE, BIRMINGHAM
13-15 July
New Bingley Hall, Birmingham
Each July thousands of visitors travel to Birmingham to find out at first hand the latest technology, products and support services available to people who are blind or partially-sighted. With over 80 exhibitors, Sight Village is the premier exhibition for blind people and for professionals supporting and advising vision impaired people.
Fees: None
For further information: Tel: 0121 428 5050, email: sv@qac.ac.uk or visit www.qac.ac.uk/sightvillage

INTERNATIONAL CONFERENCE ON COMPUTERS HELPING PEOPLE WITH SPECIAL NEEDS (ICCHP)
14-16 July
University of Technology, Vienna, Austria
ICCHP is an academic conference with a very broad three-day programme that is expected to draw some 600 delegates. The conference focuses on technology for people with disabilities. User involvement and user-centred design are the underlying general topics.
Fees: The general registration fee is €550 and the one day fee is €250 (up to June 30). On-site registration costs €600. Students enter free.
For further information: Tel: +43 (0) 732 2468-8821, email icchp@jku.at or visit www.icchp.org

14TH BIENNIAL CONFERENCE OF THE INTERNATIONAL SOCIETY FOR AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (ISAAC)
26-29 July
Convention Centre, Barcelona
The ISAAC conference focuses on people who communicate with little or no speech. With thousands of members in 60 countries, the 15 ISAAC Chapters work together so that everyone can communicate. Each biennial conference includes families sharing success stories, breakthroughs, fun social activities, scientific paper presentations, and demonstrations of assistive equipment.
Fees: There are a wide variety of fees ranging from €100 to €500 depending on who you are and how long you plan to stay.
For further information: Tel: +34 93 510 10 05, email: congresos.barcelona@viajesiberia.com or visit www.isaac2010.org

COMMUNICATION MATTERS SYMPOSIUM
26-28 September
Gilbert Murray Conference Centre, Leicester University
Keynote speaker Jean Gross, the Communication Champion for England, will set the tone for over 50 presentations at the UK's largest augmentative and alternative communication event. The two-day symposium includes a conference, social events and a trade fair.
Fees: Two nights residential from £385, one night residential from £330, non-residential from £270. Subsidised places for people who use AAC. Discounts for bookings made before July 31.
For further information: Tel: 0845 456 8211, email: admin@communicationmatters.org.uk or visit www.communicationmatters.org

REHACARE INTERNATIONAL
6-9 October
Dusseldorf Exhibition Centre, Germany
Rehacare is one of the largest international trade fairs for people with special needs and those requiring care. 700 exhibitors from 30 countries are expected to take part in the event. Over a third of exhibitors are professional associations, organisations and self-help groups. The show occupies six exhibition halls and a total of 70,000 square metres of exhibition space. Last year 50,000 people came through its doors.
Fees: €7 in advance or €12 on the door.
For further information: Tel: +49 (0) 211/4560 - 984 or visit www.rehacare.com

DISABILITY NORTH EXHIBITION
20-21 October
Metro Radio Arena, Newcastle
Information equipment and advice for disabled and older people.
Fees: Free
For further information: Tel: 0191 284 0480, text: 18001 0191 284 0480, email: events@disabilitynorth.org.uk or visit www.disabilitynorth.org.uk

Contacts

Ability magazine
Editorial, advertising and other enquiries:
john.lamb@abilitymagazine.org.uk
www.abilitymagazine.org.uk

AbilityNet
Charity advising disabled people, employers and others on assistive IT.
0800 269545
www.abilitynet.org.uk

Directgov
Government site with help on employment, training, education, financial support, transport, rights and other issues for disabled people.
www.direct.gov.uk/en/disabledpeople/index.htm

Employers' Forum on Disability
Claims to be the world's leading employers' organization focused on disability as it affects business, including recruitment and retention of disabled staff and serving disabled customers.
www.efd.org.uk

Emptech
A database that provides information resources on assistive technologies, which are designed to help those with specific disabilities work and study. Emptech includes product descriptions, links to manufacturers, suppliers' addresses, as well as other related resources.
www.emptech.info

IT Can Help
Volunteers offering disabled people free local help with computers.
0800 269545
www.itcanhelp.org.uk

Leonard Cheshire
Disability care charity providing support services for people with physical disabilities and learning difficulties.
020 3242 0200
www.lcdisability.org

Shaw Trust
Charity that champions the abilities of disabled people, enabling over 60,000 people per year experiencing all types of disability to make the most of their skills, abilities and employment opportunities.
01225 716300
www.shaw-trust.org.uk

Remploy
Employment services for disabled people and employers, plus other business services, including IT equipment recycling.
www.remploy.co.uk

U Can Do IT
A charity that provides computer training for blind, deaf and disabled people in their own homes.
020 7730 7766
www.ucandoit.org.uk

Workability
Services to help employers fill vacancies and disabled people to get jobs. Part of charity Leonard Cheshire Disability.
0845 671 7173
www.workability.org.uk

My modest proposals

The only plans the government will accept are those that save money now. Kevin Carey has three suggestions

There are two kinds of proposal that the new coalition Government will not accept in spite of their apparent seductiveness: expenditure to secure the enjoyment of a right; and expenditure now to save money later.

The kinds of proposals they will accept are those that save money now.

I have three such proposals. First, all public sector processes and information architecture should be radically streamlined. If this proposal were adopted it would immediately save huge costs and radically improve accessibility.

On the process point, the price we would all have to pay would be a loss of refinement but part of the savings could be used to 'round up' in the worst cases.

The legislation we have, particularly on tax and benefits, is just too complex to be effectively digitised for general use, particularly on PDAs and mobile phones.

If processes are not simplified, Government will have invested in the web in vain because it will still have to pay for non-web provision for more than 25% of the population who don't have a home PC and account for the bulk of public service transactions.

A golden opportunity

If the old, the poor and the disabled are shut out of digital processing the Government will fail to take advantage of a golden opportunity.

But the way that simplified, accessible systems come into operation may be somewhat counter intuitive. The only way that the Government will take accessibility seriously is if it institutes digital-only services.

It will cause us some temporary inconvenience but I can't see any realistic alternative. If, for example, benefits claims have to be digital, the DWP will have to make proper accessibility provision for disabled people.

Kevin Carey is head of eInclusion Consultancy at ATcare and chair of RNIB, writing in his personal capacity

As for information provision, the architecture of most Government websites is far too complex. I suggest that a good benchmark would be that if a site is easily navigable on a mobile phone, it's probably as good as it can be for people with intellectual disabilities and those using switches or screen readers, balancing the number of links with the number of clicks to reach a goal.

But if simplification is to work the web designers will have to take taxonomy much more seriously.

Most Government sites lack predictable taxonomy, mixing up navigation with information classes; and of course there is little consistency between sites so that they have a common look, feel and taxonomy.

Designers also need to give much greater consideration to fuzzy, non classical taxonomy; and they should accept the anti intuitive finding that the greater the number of classes, the more difficult the classification.

Access to information

My second proposal is that the Government should give up on all personal databases and require us to hold our personal data on a website that it can access with proper authorisation; so we will keep our own tax records and health records and doctors and tax inspectors will have de-encryption codes from us to access our information.

Such a proposal will save billions on pointless, over-heavy and crash prone database amalgamation projects. For those who are not online, provision will need to be made for trusted intermediary provision.

The major objection to such arrangements is the fear of breaches of privacy but if there is a mistake it will likely only affect one person whose record is accidentally accessed rather than millions.

In terms of how we understand the relationship between the citizen and the public website, we have been stuck in an analogue frame of mind for the past 15 years. It's time to move on and save money.

Finally, we need to end the three-cornered stand-off between the Government, industry and the third sector over the accessibility of consumer goods by a rational approach to capital investment and profit sharing.

If, as the disability sector maintains, accessibility improves market share, it should be prepared to invest in accessibility and share the profits engendered by the larger market. Just saying: "I have a right to it and the Government must provide it" is not going to be good enough. ■

iansyst
expand your world
achievement through technology

expand your world

achievement through technology

www.iansyst.co.uk

The independent experts in assistive technology solutions for people with dyslexia and other disabilities

0800 018 0045

www.iansyst.co.uk
www.re-adjust.co.uk
www.dyslexic.com
www.its4students.co.uk

Sight and Sound Technology

Visit our stand at *Sight Village Birmingham 2010 to redeem this money off voucher or call us on 0845 634 7979

Sight Village Birmingham, 13th - 15th July 2010, New Bingley Hall, 1 Hockley Circus, Birmingham, B18 5BE

£100 or 10% SAVING

The choice is yours!

Offer valid from 13/07/2010 until 23/07/2010

Voucher can be redeemed once on all Sight and Sound Technology solutions for the Blind and Visually Impaired with an RRP exceeding £350.00 and cannot be used in conjunction with any other promotion or special offer.

For Official Use Only