ability

Assistive technology at work

Dishing dyslexia

How technology overcomes problems with reading and writing

- **Why Access to Work rules need changing**
- **Cloud services could be more accessible**
- **Review of Georgie smartphone**

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Ability is a founder member of the British Assistive Technology Association

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John Lamb considers whether the games will further the cause of accessibility

The Paralympics effect

Will the post-coital glow engendered by the Paralympics lead to a more accessible future for disabled people? The fact that 37m viewers tuned into Channel 4's coverage has got to help in terms of raising awareness of disabled people and their abilities. When Oscar Petorious features alongside Dennis the Menace in the Beano comic then you know something has changed.

But will that higher visibility translate into more accessible websites, better access to augmentative and alternative communication and much needed assistance to get and hold onto a job?

It is difficult to say: not least because the day-to-day reality of someone who needs assistive technology is very far from that of the glamorous athletes who thrilled us this summer.

It has been hard going over the last two years: changes in the benefits regime, a tightening of the rules that apply to schemes such as Access to Work and Disabled Students Allowances have tended to have a chilling effect.

Ominously, Liz Sayce, chief executive of Disability Rights UK, talked recently of rising fear among disabled people. Fear of increased violence against individuals and fear that financial benefits will be withdrawn.

So, if the higher public profile of disability is to have an impact then it must be accompanied by positive action. The new minister for disabled people Esther McVey recently launched the Government's disability strategy, which involves creating an alliance of organisations involved in the field.

Entrepreneur McVey also told Ability she has a special interest in expanding Access to Work possibly extending it to disabled entrepreneurs. One of her friends runs iwheeliecan, a firm that trains disability carers.

Organisations too have a big role to play in capitalising on the Paralympics effect. Lloyds Banking Group, for example, has thrown its weight behind accessibility. The company has just deployed a battery of technologies designed to make its services more accessible including signing on its website, talking cash machines and an enhanced textphone that allows deaf people to converse with bank staff.

Intriguingly, the move to accessibility is seen by Lloyds as a central plank in an effort to improve the bank's service to all customers. That thought as much as anything else is our best hope for carrying off the prize of accessibility for everyone.

Finally, even the most aware and well-intentioned organisations can slip up.

At the Mobility Roadshow this summer, where the majority of visitors are in a wheelchair, people were invited to vote for the most useful innovation by ticking one of scores of entries pinned to a large notice board. Unfortunately the top line of innovations was out of reach of someone sitting in a wheelchair. ■

Liberation technology

People with sight loss aren't just benefitting from advances in technology, they're creating them.

We are moving from products for mainstream markets that are adapted for the blind; to technologies customised for the blind; to technology initiated by the blind. I call it liberation technology.

Engineers have already developed a device that automatically helps blind people navigate the streets. The technology is an adaptation of Microsoft's Kinect, a motion-sensing device for the Xbox 360 games console. What they've done is to mount it on a belt so that blind people can find their way around.

The belt sensor is able to detect obstacles in front of the walker and transmit this information via vibrations to the person. The vibrations increase in intensity as the person gets nearer to the object.

It just shows that liberation technology isn't just about developing new tech, it's often about identifying a current technology and reapplying it.

Could it be that blind people may soon be able to drive? Google's robotic self-drive Toyota Prius has chauffeured a blind man to a Taco Bell restaurant and a dry cleaners near his home.

The car has sensors that detect the presence, speed and direction of other cars and brake accordingly and drives following a computer map of the route.

In early 2012 the State of Nevada became the first state authority to create regulations for companies testing self-drive cars on public roads.

Of course customising technology for the blind is getting easier through mobile phone apps. Mario Romero, a post doctoral researcher at Georgia Institute of Technology, has co-developed an app called 'Braille Touch', which could help blind people to send text messages and type emails on touch-screen smart phones without the need for expensive equipment.

To use the app, people hold their phones with the screen facing away from them and punch combinations of touch screen buttons to form characters. The screen speaks a letter after it's been registered so that there is no need to see the screen.

Self-service technology like cash points and train ticket dispensers is also becoming accessible. The key is smart card technology.

The Special Needs Application Programme Interface (SNAPI) project has been developing a smart card that can carry people's access requirements so that when the smartcard is inserted into a self service terminus the machine changes to meet their access requirements, for example a screen changes to the person's preferred font size or colour contrast.

True liberation, however, comes with the power to initiate. People with sight loss are as creative as anyone else and all inventions start as ideas.

Now the web is making it easier for people with an idea to form collaborations with other people with technical skills or connect with those prepared to fund the project.

Kickstarter is the world's largest funding platform for creative projects and has attracted enough patrons to fund almost half the 40,000 projects that people have uploaded as video clips.

Projects are submitted at no cost and Kickstart takes a 5% fee if projects achieve their funding target, while Amazon takes a 3-5% credit card processing fee.

However, digital exclusion is still very real. It's important to work with designers to ensure accessibility is considered. Perhaps blind and partially sighted people could offer themselves as members of user or testing groups. And training courses on software design could include a module on accessibility.

Liberation technology has to be affordable. Luckily, manufacturing costs are getting cheaper as manufacturing technology improves. It was once the case that producing something for a 'niche' audience like people with sight loss wasn't viable financially. But now 3D printers can be programmed to print out an object without having to set up a whole new production line or commission the object to be made by hand.

The internet is increasingly being used to source crowds: for finding shared interests so people can begin the search for love; for consumers wishing to exercise the collective strength of a group's purchasing power; for activists working to organise protests like the Arab Spring.

In the near future disabled people will also come to experience the liberating power of crowds. It is a key task of the Disability Resilience Network, which has attracted people keen to harness liberation technology.

This is just what the movement needs. A voice. A collective voice. A strong voice. And one that will improve the lives of people with sight loss for generations to come. ■

Philip Connolly, Founder of the Disability Resilience Network

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

One stop shop for accessible IT

The Disabled Living Foundation (DLF) has expanded its Living Made Easy public information service to include accessible software for the first time.

The Living Made Easy online service was launched in 2008 and now attracts over 720,000 visitors annually who access pages containing information about living aids some 2m times.

The Department for Culture Media and Sport (DCMS), commissioned the DLF to add some 250 IT products to its listings with the emphasis on augmentative and alternative communication.

"We have funded the Disabled Living Foundation's one stop shop for accessible IT so people can compare customer service and get advice on products," said Ed Vaizey, minister for Culture Media and Sport.

"This kind of access should be at the forefront of buyers', designers' and marketers' minds. I think all business should be thinking about how to interact with their disabled customers."

Living Made Easy now covers assistive software, keyboards, telephones and telecare products with information about prices and where to buy goods.

Entries also include a rating system based on a suppliers' membership of a trade association that has a code of practice governing customer service and the comprehensiveness of the information supplied to Living Made Easy.

The DLF stresses it does not carry out tests and ratings are not an indication of the quality of a product.

Visitors can also get guidance on IT systems from Living Made Easy's sister site AskSARA, which takes users through a questionnaire to determine what kind of technology might help them.

The DLF also runs a paid for information service for disability professionals called DLF Data, which also includes details of accessible IT. ◼

www.livingmadeeasy.org.uk/

Low cost Braille displays on the stocks

Low cost refreshable Braille displays for use with ebooks are likely to be available next year. A project to find a cheaper method of producing Braille cells – bringing down the cost of a cell from $100 to a target of $25 per cell – is close to completion.

The DAISY Consortium and the RNIB have been considering three different technologies drawn

from over 50 contenders. Work on a production prototype is set to go ahead early next year, once a winner has been selected.

Refreshable Braille devices are made up of individual plastic cells with a grid of tiny holes through which a small rod rises and falls, triggered by an electronic current.

At present, a Braille display

consisting of 32 cells costs around $5,000, putting it beyond the reach of many potential users.

"Current refreshable Braille technology is prohibitively expensive for everyone, resulting in those who want and need to read by touch being left behind in the ebook revolution," says the DAISY Consortium. ◼

www.daisy.org

Gym websites are out of condition

Would-be athletes inspired by the Paralympics will find it hard to find a gym to begin their fitness regime.

The websites of the top five gyms are either difficult or impossible for disabled people to use, according to IT charity AbilityNet.

Sites run by Fitness First, LA Fitness, Nuffield Health, Pure Gym and Virgin Active Health Clubs –

surveyed by AbilityNet as part of its eNation investigation of website accessibility – suffered from a number of shortcomings.

Inconsistent navigation, text embedded in images, missing alternative text, poor labelling of links and pages on which it was difficult to increase the size of text and still see it were among the

failings AbilityNet found.

"It is illegal to bar disabled visitors from on-line services and information offered to the general public. No organisation would purposefully do this, but many are either not aware of the problem or simply don't know what to do to address it," AbilityNet points out. ◼

www.abilitynet.org.uk

AT could safeguard 'at risk' children

Assistive technology could play a key role in safeguarding disabled children at risk of abuse, according to the British Assistive Technology Association (BATA).

The recent Office for Standards in Education, Children's Services and Skills (Ofsted) report *Protecting Disabled Children* highlighted the risks that disabled children face of falling through the child protection net. Last year there were over 54,000 disabled children in England identified as being in need, of whom 1,600 were the subject of a child protection plan.

However, Ofsted reported that social services professionals do not give enough consideration to obtaining the views of disabled children.

Technology could ensure that children can communicate their needs effectively to social services professionals, says BATA.

In cases where the views and feelings of children were captured effectively, staff knew the children well, said Ofsted.

They understood how the child liked to communicate and, where appropriate, used tools such as picture exchange, electronic widgets and basic signing to capture children's views.

"Assistive technology such as voice output aids, text to speech software and symbol-based systems that help children to communicate play an important role in breaking down the barriers that disabled children face," says Barbara Phillips, chief executive of BATA.

"Greater use of these proven and easy-to-use tools could enable social services professionals build closer relationships with their vulnerable young clients."

The *Protecting Disabled Children* report examined the actions taken by local authorities to ensure the protection of disabled children and young people, identifying the key factors which promote effective protection and the barriers to achieving this. ■
www.ofsted.gov.uk/

Gatwick airport invests £2m in high tech aids for passengers

Gatwick airport has spent £2m on equipment and services for passengers with reduced mobility over the past two years.

The airport, which provides assistance to 47,000 passengers per month at peak periods, has installed audio visual information systems to help deaf, hard of hearing and vision impaired passengers.

Clearer signage and passenger information have been designed for passengers with learning disabilities.

Gatwick has also bought six ambulance minibuses, 100 wheelchairs, 36 buggies, 10 aisle chairs and five Ambi lifts.

Over 380,000 disabled passengers passed through London's second airport last year, up 13% on 2010. ■
www.gatwickairport.com/prm/

Teenager's talking iPad is grounded

A teenager is challenging the American air industry over rules that forbid the use of augmentative and alternative communication (AAC) devices during take-off and landing.

Carly Fleischmann, a 17-year-old with autism from Toronto, spoke out online after American Airlines cabin crew asked her to turn off the iPad that she uses to speak during a recent flight.

"If a flight attendant came up to your child and duck-taped their mouth shut for take off … would you be ok with that?" wrote Fleischmann on her Facebook page.

"My augmentative device is my mouth and my hands. I take my iPad to the washroom, to my bed and everywhere I go. I am not playing games on it, I am speaking with it."

The airline said it was following federal safety rules that prohibit the use of electronic devices during take-off and landing.

There are exceptions for medical devices including hearing aids and pacemakers but AAC devices are not mentioned.

Fleischmann, who has featured on US TV, is discussing the matter with American Airlines and the Federal Aviation Administration. ■

Cloud 'harder to use', says survey

Three quarters of blind and visually impaired users find cloud applications harder to use than desktop software, according to a survey by Hertfordshire University.

Researchers recently quizzed 100 blind and sighted users about the user friendliness of online applications including Dropbox, Googledocs, Google word processing, Google storage and social media.

Some 77% of vision impaired users and 29% of sighted users said the cloud applications were harder to use than similar applications running on their own PCs.

They cited problems with screen readers, poor interface design, security and internet connections.

Some users were concerned that synching could delete valuable information from their desktop machine; especially among screen reader users who feared they might inadvertently choose the wrong settings.

Visually impaired respondents were more concerned than sighted ones about security and privacy, 67% contrasted with 51%.

They were also more worried about accessibility of applications, with 59% raising this as an issue.

Only 13% of sighted users mentioned accessibility.

In spite of all the difficulties, on the key question of impact of the cloud on work, no less than 37% of blind respondents thought work would be easier, compared with 51% of sighted respondents.

Worryingly, 53% of blind people, but 10% of sighted respondents thought work would be harder.

"Cloud computing is an increasingly important part of life for both work and leisure," said Professor Diana Kornbrot, who led the study. "It is obviously important that visually impaired people are not disadvantaged by accessibility problems." ■
http://dianakornbrot.files. wordpress.com

FAST report reviews over 300 AT projects

The Foundation for Assistive Technology (FAST) has published its annual review for parliament of over 300 publicly-funded research projects.

The publication, called *Research and Development Work Relating to Assistive Technology 2011-12*, provides a summary of each project.

It gives details of the research teams taking part and funding sources, as well as links to further information on the FAST website, including participant contact details and project progress.

Around 30 projects are featured in detail to highlight the potential for assistive technology to transform people's lives.

The featured projects include work at the University of Ulster to find ways to allow disabled people to operate computer games and environmental controls using the power of brainwaves.

Other technologies developed by the projects include devices to help older people use online banking services easily and a robot companion which can summon help for someone who has fallen at home.

The report also highlights the policies that affected the delivery of assistive technology services over the past year.

Policies reviewed by FAST include the Health and Social Care Act and the wider adoption of personal budgets.

The government-sponsored 3million lives campaign, and a study of the mobility aids market by the Office of Fair Trade were also put under the microscope.

The report is intended to be of use to researchers, commissioners, health and social care practitioners and members of the public.

The information it contains is also available on the FAST website. ■
www.dh.gov.uk/health/ files/2012/07/Research-and- development-work-relating-to- Assistive-Technology-2011-12.pdf

Home monitors set for massive growth

The numbers of monitoring devices used by older people living in their own homes and care homes is predicted to increase more than 10-fold in the next five years.

At the moment some 3m monitors are in use around the world, but that is forecast to grow to 36m by 2017, according to ABI Research.

The ability to leverage wireless communications – either using short range or cellular radio – in a form that can be worn without restriction or discomfort will help extend the ability of seniors to live independently and care givers to provide crucial care, says ABI. ■

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Load2Learn aids print impaired students

Dyslexia Action and the Royal National Institute of Blind People (RNIB) have launched a service for learners who cannot read standard print.

Load2Learn is an online resource for schools to better support learners with dyslexia and those who are blind or partially sighted.

Curriculum materials for all Key Stages – textbooks, test papers and images – can be downloaded in a range of file formats and then adapted to suit the personal reading needs of students.

There are currently over 1,500 titles and 1,000 images available to be customised to create different print or Braille versions.

The website provides textbooks, images and other resources such as Word, audio, EPUB, PDF and CorelDRAW files.

The documents can be used with technology that the learner may already have such as laptops, text to speech readers and DAISY players.

Around one in 10 students struggle to read standard print and this can prevent them from getting the most out of lessons and homework in the same way as their classmates, say the charities.

It can take days to do all the sourcing, scanning, photocopying or printing.

"Load2Learn means instant access; I can get a PDF onto the student's laptop on the same day," says Sally Appleyard, who works at an educational resource centre in Hull.

"It saves us time and frees up staff to concentrate on supporting students. We have already used the resource and will definitely be using it a lot more in this academic year."

Load2Learn costs £150 per year for a school of up to 100 pupils and £670 for a school of over 1,200 pupils. ■

www.load2learn.org.uk

Minister aims to get tech firms working together

Newly appointed minister for disabled people, Wirral West MP Esther McVey has launched the Disability Action Alliance of organisations involved in disability.

The Alliance has been set up in response to a consultation called *Fulfilling Potential – The Next Steps*.

Among proposals the Alliance will be considering is that the Government adopts a more strategic commissioning strategy to get technology providers working together to produce compatible and effective products.

The Office for Disability Issues will be responsible for the Alliance, which is being set up by Disability Rights UK.

Other issues identified by the consultation include how disabled people can access the training and support they need to use available technology.

McVey, an entrepreneur and former TV presenter, will also be looking at how to improve Access to Work, which was given an extra £15m earlier this year.

She will aim to increase awareness of the scheme especially among under-represented groups, including people with learning disabilities, those with mental health conditions, black and minority ethnic groups, small businesses and people under 24.

"Esther McVey's predecessor Maria Miller MP particularly impressed us with her determination to expand the Access to Work Programme, which sees £1.40 return to the Exchequer for every £1 invested," commented Susan Scott-Parker, chief executive of the Business Disability Forum (formerly Employers' Forum for Disability).

"We trust Esther McVey will continue to expand this essential programme." ■

Games system fits like a glove

Goldsmiths College, University of London, has developed an audio system based on games software to help children with learning difficulties interact through natural gestures.

The Kinect Audio Project (KAP) is designed for users with autism spectrum conditions, mobility, learning or speech difficulties.

The system was developed by MSc computing student Patricia Afari to encourage users to exercise, understand movement and to be independent.

Based on audio visual cues, KAP displays a camera image of the user and replicates the user's hand movements on-screen through oversized, animated gloved hands. Users can move their hands to interact with on-screen visuals, which in turn trigger sounds.

"Children learn through repetition, so it was important not to incorporate randomised audio responses. Instead, each visual has been assigned a particular note or instrument," says Afari.

KAP is currently being trialled at South Downs Community Special School, Eastbourne. ■

www.gold.ac.uk/computing/

NHS to provide communications aids

Campaigners celebrate milestone at Communication Matters conference

The NHS in England has been given responsibility for providing augmentative and alternative communication (AAC) equipment and services to those most in need of them.

The Government has accepted a recommendation from the Clinical Advisory Group that AAC services for the 10% of most complex cases should be commissioned nationally from April next year.

The remaining 90% will be provided on a local basis by specialist organisations and local Wellbeing Boards.

The move, which follows the announcement in Scotland that an extra £4m pounds is to be given to health boards to improve services and provide new equipment, has been welcomed by AAC campaigners.

"It is a really exciting time in AAC and a culmination of our work over many years," Gary Derwent of AAC charity Communication Matters told delegates at the organisation's annual conference.

"It is an avalanche that can't be resisted: keep up the pestering."

Many of those involved in AAC have been frustrated by buck-passing between the departments of health and education over who had responsibility for AAC.

"For too long, there has been a postcode lottery in AAC provision, a shortage of specialist professionals and battles between health and education commissioners over

THE POWER OF COMMUNICATION — communication MATTERS

whose responsibility it is to meet the needs of these children and adults," said Janice Murray, chair of Communication Matters.

"This is unacceptable and has to change to ensure our members can fulfil their life potential."

Communication Matters has been given a £600,000 grant by the Department for Education to carry out a number of tasks including to map existing services, draw up guidelines for local services and recommend specifications for a database that will hold care pathways for those with communications needs.

The group will also be discussing how to bring down the cost of AAC by smarter procurement.

There is no agreement yet however on how much money will be available for AAC – it could be as much as £35m for England – or how the services that the NHS is now responsible for will work.

Communication Matters estimates that 260,000 children and adults will need AAC at some point in their lives.

Some 26,000 have the most complex needs, which demand access to specialised AAC services and equipment.

Traditionally there has been a lack of secured funding and services to support the complex needs of AAC users.

They have had to battle not only to receive funding for the equipment they need, but also to have access to specialist services for assessment and support. ■

CONFERENCE BRIEFS

Tobii adds gaze selection
Eye-tracking company Tobii's stand at the Communications Matters conference drew crowds as the company demonstrated gaze selection of the Windows control software on its PCeye system. The software allows users to zoom in on Windows menus by looking at them, making it possible to focus on small areas of a PC screen. "Not only can you control your interface instantly with your gaze. The computer also becomes more adaptive," says the company.
www.tobii.com

Logan shows ProxPAD
Logan Technologies has introduced a device that plays back pre-recorded sounds when objects are swiped across its surface. Intended for children with limited hand function and visual impairment, ProxPAD incorporates many of the features from Logan's ProxTalker communication device.
www.logan-technologies.co.uk

ACE Centre is on the move
The ACE Centre has moved to a new site in Oxford after its merger with ACE Centre North in Oldham. "Our goal in relocating was to find a site in Oxford that would meet the needs of all the children and adults we currently support, and which would give us the potential to develop further in the future," commented Anna Reeves, manager of the national charity that provides augmentative and alternative communication services.
www.ace-centre.org.uk

Smartbox cuts the cost of environmental controls

Competition among companies making environmental control systems is hotting up.

Smartbox Assistive Technology has thrown down the gauntlet with a low-priced environmental control system combining its Grid2 symbol-based software with off-the-peg hardware.

The Servus system (pictured right), which was exhibited for the first time in October at the Rehacare show in Germany, enables disabled people to control domestic appliances, TVs and telephones, and to connect to the internet from a single display.

"We are aiming to provide a lifestyle tool that is available in an interface with a variety of inputs," said Smartbox's Dougal Hawes. "Servus is a mix of consumer products and specialist devices: we have based it on readily available technology that is cheap to buy."

Although prices have not been finalised, the environmental controller, expected to be distributed through statutory schemes such as the NHS Electronic Assisted Technology programme, will cost around £1,300, says Hawes,

This compares with a current discounted price of £1,600 for Possum's Primo touch screen system on the Living for Health website. Smartbox's system will work with existing Possum and RSL Steeper environmental control units.

Servus uses a Windows 7 tablet running adapted symbol-based Grid2 software connected to a controller. The controller interfaces with appliances that receive infra-red signals, such as TVs, as well as those, such as electric sockets, that pick up radio signals.

The system uses a large number of existing standards including the GEWA standard for infra-red control

and the EasyWave, Z-Wave and Wi-Fi radio standards.

It can be supported remotely and users can access it via wireless switches, voice, eye gaze and touch screens. There are additional USB ports for connecting joysticks and other peripherals.

"Environmental control is where the communication aids industry was 10 years ago," Hawes told *Ability*.

"Existing solutions are based on dedicated hardware that is expensive and controlled by a small number of companies: what we are offering is a more powerful system that is easier to make, easier to use and is better value." ∎

www.smartboxat.com

Lightwriter Swift aims at faster communication

Toby Churchill has brought out Lightwriter Swift, the handheld version of its long established Lightwriter communication aid.

The Lightwriter Swift has been designed to speed up the communications process.

It has an ingenious 'quick sound' feature that enables users to produce sounds such as whistles, yawns and

throat clearing that they might use in a conversation.

In addition users can store up to nine pre-recorded phrases in a grid that can be accessed by a joystick.

With software that predicts what word a user might want to use next, the Lightwriter Swift has two screens: one for a user to compose messages on and one at the end of the device

that is read by the people he or she is communicating with.

The production model of Lightwriter Swift, which is on sale at a discounted £1,995 plus VAT, was developed after feedback from initial users. Toby Churchill also consulted speech professionals who provided advice on the device. ∎

www.toby-churchill.co.uk

Active Design tests online speech output system

Active Design, a company that produces devices for postural management, is developing an online suite of AAC apps called Mespeech.

The software will allow users to create their own context-sensitive grids for speech output systems that

can be accessed from a variety of platforms.

"Mespeech enables you to manage multiple users and vocabularies from one location," says Paul Hewett of Active Design.

"You can sync with many devices

for offline speech output."

The developer is inviting interested users to become involved in testing the software over the next two months. Readers should contact www.mespee.ch to be put on the mailing list. ∎

Developing nations pledge to improve accessibility

Commonwealth communications ministers and their officials will be lobbying heads of government to do more to improve accessibility, when they meet in Sri Lanka next year,

This summer the Commonwealth Telecommunications Organisation (CTO) – which has made improving accessibility one of its key objectives – drew up an eight point 'commitment'.

The organisation, among other things, called for "policies and practices (in member states) so that people with disabilities should have equal access to information and communication technology (ICT) and accessible information, without having to pay a premium for it."

Some 80% of states that have signed the UN's Convention on the Rights of Persons with Disabilities have laws that protect the rights of disabled people, according to a survey by the Global Initiative for Inclusive Information and Communication Technologies.

However, only 36% of these 52 countries include ICT in their definition of accessibility.

Only a minority of countries involve disabled people in the design of laws and policies; or have funds earmarked for programmes in support of digital accessibility.

"Across the Commonwealth, people with disabilities are the most marginalised group," said Professor Tim Unwin, chief executive of the CTO at its conference on e-accessibility in London in August.

"Over the last decade the inequalities have got more rather than less: access to ICT is becoming more unequal," he continued.

"National policies and strategies pay attention to accessibility, but that is all too often not happening on the ground. It is a reality that must be changed if disabled people are not to become more marginalised."

Many of the 2.1bn people who live

Members of the Commonwealth Telecommunications Organisation step up to accessibility at their London

in Commonwealth countries have very big barriers to overcome.

In Sierra Leone, for example, only 1% of the population even have access to the internet. In Ghana, accessibility advocates have to battle local beliefs that disabled people have been bewitched.

There are problems even in a prosperous country such as Canada, where a scheme to provide free assistive technology in Ontario spent more money on excluding people from the programme than it did on helping those who were accepted.

The programme devoted much of its budget to the bureaucracy involved in assessing people and testing assistive technology.

Lack of skills in assistive technology, shortcomings in policy and a shortage of hard information were among the issues highlighted at the conference.

Where legislation existed there was often no attempt by governments at implementing or enforcing it. In Europe, for example, words of EU directives were copied into law, but no action was taken, so the law is "completely useless".

Disabled users should be more involved on policymaking, delegates agreed, while better standards would ensure that technology was designed for the full range of users.

Several delegates argued that older people, who may represent as much as 65% of disabled people, were not well served by ICT.

"They are scared, they don't see the point of it, so lots of people just give up," said Professor Alan Newell of Dundee University. "We need to produce systems that don't increase the cognitive load."

Older users were not a set of characteristics, Professor Newell added. Systems should focus on usability rather than accessibility.

Kevin Carey, co-chair of the RNIB, outlined his view that accessibility should be measured in terms of how quickly disabled people could complete a task.

The CTO's statement of commitment:

■ The inclusion of e-inclusion on the agenda of the heads of government meeting

■ Policies and practices so that people with disabilities should have equal access to ICT and accessible information, without having to pay a premium for it

■ An e-inclusion champion in every Commonwealth country

■ An e-inclusion policy in every Commonwealth country

■ The sharing of examples of existing good practice in the Commonwealth and beyond

■ Government and business use of ICT procurement to encourage inclusive design

■ The drawing up of an accessible technology charter

■ Effective training programmes on e-inclusion for governments, the private sector and civil society. ■

www.cto.int

Playing with Georgie

Allana Grant is excited at the prospect of a new smart phone for blind and visually impaired people

I find myself faced with the unenviable task of choosing a new mobile phone. Nowadays, with smart phones doing so much more than just making calls and sending texts the decision is one that I am not taking lightly.

So, my interest was aroused when *Ability's* editor offered me the opportunity to test the Georgie application for blind and visually impaired users, a recent winner of a Google award for Outstanding Use of Technology in the Field of Diversity.

Georgie is the creation of husband and wife team Roger and Margaret Wilson-Hind and software developer Alan Kemp.

The app is an overlay to the Google Android operating system, and has been specifically designed to help blind and visually impaired users perform day-to-day tasks such as catching a bus, reading printed text, sending and receiving text messages and knowing their exact location at any given time.

When the app is activated; it overrides the Android operating system. It is broken up into several sections that speak their functions when the appropriate icon is touched.
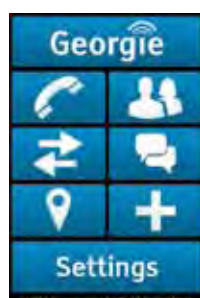
The home page buttons and menus are arranged in a streamlined accessible layout which took me minutes to master. Towards the top of the screen is the ever present function entitled Georgie News and Help, beneath are six icons, and further down is a settings icon.

Navigating is simplicity itself: gently drag a finger across the screen till you reach your destination. Select it by hovering your finger over it and wait till you hear a beep. Remove your finger and you are presented with further options.

There are only a few more uncomplicated gestures in addition to this which you need to familiarise yourself with. I found that being able to navigate screens and menus confidently after just a short period of time helped overcome my mistrust of touch screen devices.

The phone icon allows you to make calls to a contact or to a number that you manually enter. The app has a standard number pad. The only difference is that redial and return call are on either side of 0 in place of the star and hash keys.

Making calls is a routine matter, but there are a couple of flaws in Georgie's design: the absence of star and hash keys makes performing tasks such as checking your credit balance difficult.

In addition, I experienced difficulties trying to answer an incoming telephone call. As it stands, Georgie doesn't recognise the icon that you need to drag across the screen to answer.
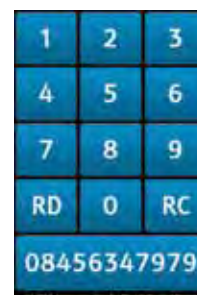
Having talkback enabled under accessibility settings should make this process easier. The developers did inform me, however, that they have plans to produce a phone that has a special version of Android installed on it. This will allow the inaccessible buttons to be replaced.

A new release of Georgie is due end of November says Sight and Sound, the company that distributes Georgie. The new version has star and hash buttons rather than return call and redial. It also has a big green button to answer and a red button to reject incoming calls.

Choose a recipient, record your message, check it is accurate and finally send a text message. This is a great concept but the speech recognition software needs to be improved somewhat as it really doesn't cope well with dialects (I am Scottish).

Texting options are limited at the moment: you are unable to reply to or forward a text, or delete sent messages. These functions, as well as an alphanumeric keyboard, will be included in Georgie's next major update.

One extremely useful feature, however, is Easy Texts. You can set up a list of texts via the screen reader website and they will automatically be saved to your phone. It is then simply a matter of deciding which one you want to use and who you want to send it to.

The Places feature could be of great value to users if it were developed to its full potential. At present, some

of the functions within this app do not work consistently enough to allow for accurate use.

The inbuilt compass often malfunctions, which has a knock on effect on other sections of the app such as the ability to record landmarks.

If, for example, you are facing the wrong direction, the information which should guide you to your recorded landmarks is of little use.

On the occasions that I did get an accurate reading from the compass I was able to put the landmarks function to great use: labelling two particular crossings that I habitually miss because there is no kerb. Sight and Sound assures me that the problems with the compass are now fixed.

The most impressive function in Places is Where am I? Press it at any time, and it will provide detailed information of your current location, including the street name and postcode.

Although Georgie has many positive attributes; I believe that the three add-ons available from its distributor take the app to a whole new dimension. I'd go so far as to say that they are a must

The Travel bundle is excellent. It allows you to access useful information about public transport in your vicinity.

The bus icon, for example, locates your closest bus stop: providing directions to guide you there, and bus times thereafter.

All the stops along the route are announced as well.

I particularly rate this function as the depth of information available to the user is impressive; though it does take time for the info to come through.

Using the app allowed me to enjoy a greater degree of independence. However, I must reiterate my point that the efficiency of this add-on is dependent on the unreliable compass.

The Near Me function is also of great value to blind and visually impaired users as it can access a list of places to eat, drink and shop, as well as hospitals and banks: especially useful if you are in unfamiliar surroundings.

No less impressive is the Lifestyle add-on. It provides access to talking newspapers, audio books from LibriVox and podcasts via Info sound. The only real drawback is that your choice is limited in all three. The developers are however working to increase the list of titles on offer.

The Communication bundle includes an optical character recognition feature that is used to scan and read aloud text documents. The OCR is unfortunately still rather difficult to use without assistance from a sighted person.

The audio guidance, designed to help you scan your document correctly, is most unhelpful. Your best bet

is the express scan option, even then, it is odds on that you'll have to scan a few times before you properly align the camera with the document.

The instruction manual should provide a detailed explanation of how to take a scan photo, I feel.

On a positive note, after managing an accurate scan reading the document was easy enough using the app's listening console.

I was luckier using the camera to identify labels on food packaging, CD covers and medication boxes. What a time saver! I would usually have to ask my partner, or go down the time consuming route of making Braille labels.

Georgie is for the most part maintained from the screen reader webpage:http://www.screenreader.mobi/Georgie/Default.aspx.

This webpage works well in conjunction with the app and is completely accessible to blind and visually impaired users.

I believe however, that there is room for improvement. The simple layout would allow for the addition of further options, such as viewing and editing saved landmarks.

So now it is crunch time. Would I recommend that you buy Georgie? That really depends on what you need and want from your smart phone. Sight and Sound says it is for the person with basic telephony needs.

I have particularly extensive needs as I am self-employed and always on the move.

I need the app to be all singing all dancing as it were. So, for the moment, I wouldn't purchase Georgie.

I have been greatly impressed by many of the app's features; I believe however that other functions – the compass and OCR apps – don't yet work consistently enough to warrant the high price tag.

I also feel strongly that Georgie is missing one key feature: internet access. True, many of Georgie's functions are internet applications; however, there is no search engine option and you are unable to surf the net or manage your email accounts.

In spite of these current limitations I firmly believe that Georgie will develop in to something truly special.

Indications from the software's developers are that all of these functions and much more will be added to the package over the coming months.

I am excited by the app's prospects and I think my answer will be very different in a year's time.

The Georgie app costs £149 for the basic software, £173.99 with one add-on, £198.99 with two add-ons, or £223.97 with all three. ■
www.sightandsound.co.uk
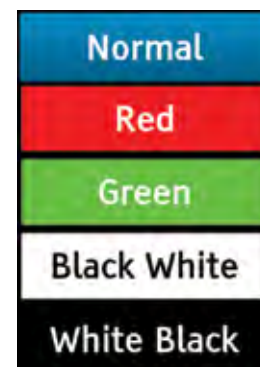
A new deal for Access to Work

Barbara Phillips explains why the Government should rethink the rules governing grants for disabled workers

It is good news that young disabled jobseekers on work experience will now be able to access extra support to help them into mainstream placements via Access to Work.

Since 2007 over 84,000 people have been helped through Access to Work, according to the Department for Work and Pensions.

But is Access to Work working as well as it could? For a start, I still can't quite believe that the assessment of what a disabled person's needs are comes only after they have secured a job.

Surely it makes much more sense to do a complete and thorough assessment at the start.

Without expert assessment and provision of the right assistive technology, how is a disabled person supposed to know what they are capable of?

If the barriers were lessened or removed – through technology and some basic human support – their confidence and job aspirations could be so different.

Without that knowledge of what is possible, and the confidence that gives, how is the disabled school or college leaver or graduate to know what work they could do? Those without disabilities don't usually know either.

But if someone in that situation had the chance to be properly assessed at an early stage and, with the right expert help, was able to identify and then become used to using the best assistive technology, how much more clearly would they be able to think about what work they are capable of.

How much more they would be able to convince potential employers that they could fill a role and add value to the organisation.

How much more likely they are to be employed because of what they can do, not just to fill the employer's sense of social responsibility or because they are afraid of being in trouble with the law if they don't.

How much better for society as a whole, and the economy, as well as for individuals who are disabled, if more businesses realised the potential they are missing out on by shying away from employing people with disabilities.

After all, there are around 11m disabled people in Britain, 39m in Europe and 650m worldwide, according to the World Health Organisation. All these people are customers as well as employees. What a waste not to tap into this pool of potential spenders and contributors.

As part of my research into Access to Work I talked to a young woman I know who has been blind from birth, has a degree and now works; and I talked to a recently retired civil servant who had worked in the Department for Work and Pensions on Access to Work and to an employer of visually impaired staff.

I was surprised to learn the Jaws software she uses, paid for by Access to Work, is job specific, so if she moves to another job, she can't take it with her and – even worse – it is only for use at work, not in her life generally. That doesn't make sense to me. In fact, it's both mean and absurd.
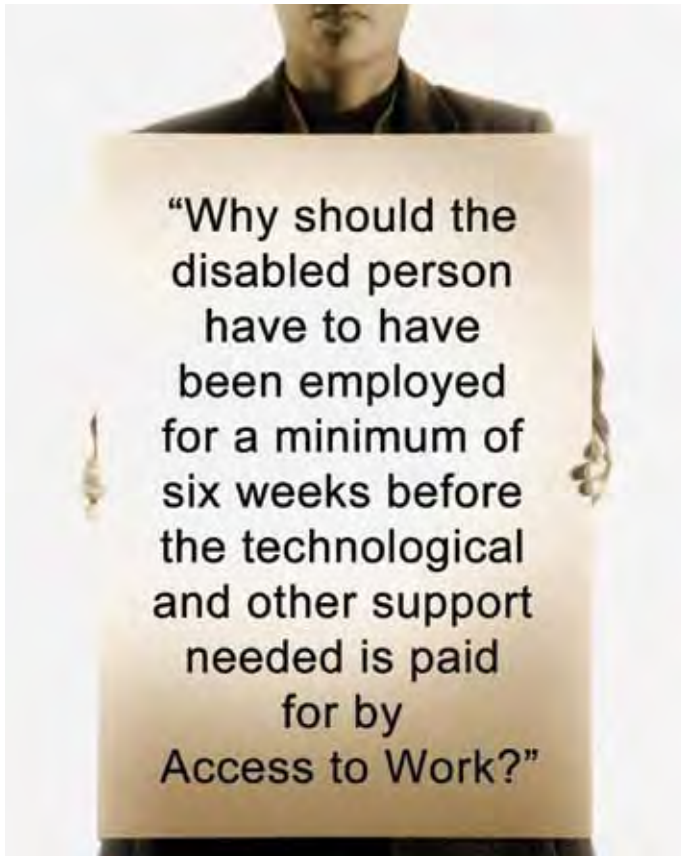
The retired civil servant shocked me by saying how

Access to Work distributes £100m per year

limited were the adjustments made in the initial tests of numeracy and literacy for people with sight or hearing impairment – and that with less obvious disabilities, the provision could be even worse.

That must mean that a lot of people with a disability do less well in those initial tests than would be the case if they were first assessed for and provided with appropriate assistive technology – and given the time needed to get used to that – before they were tested.

She also told me that there may be as few as two Access to Work advisers for a whole county. They are under great pressure to meet targets for the number of people seen who end up in employment.

No wonder that there is a certain amount of cherry picking, with those whose disabilities could be more quickly and easily 'sold' to employers being given preference over those who would take longer to find work for, or who would require more expensive adjustments in the workplace.

> "Why should the disabled person have to have been employed for a minimum of six weeks before the technological and other support needed is paid for by Access to Work?"

Not surprising, then, that not as many people as could benefit are referred to a specialist organisation for an assessment and to recommend appropriate support.

Nor are the problems over even when that does happen, because it is then up to the Access to Work adviser to decide what is appropriate, not the expert or the person with the disability.

Why should the disabled person have to have been employed for a minimum of six weeks before the technological and other support needed is paid for by Access to Work? What's worse, the average wait is 143 days, according to Action for Blind People, before the grant is paid.

No wonder the employer to whom I spoke had concerns. How, he said, is an employer to know that someone with a disability has the competence to do a job if that person does not know because they've not had a chance to try doing it with the right assistive technology?

I was regaled with horror stories of employers having to bully and cajole assessors to come and carry out the assessments or being told to come up with a shopping list themselves for approval.

He said that, because of his previous positive experience of employing visually impaired people and his knowledge of what was available, he had persisted, but he could understand why a small business employing someone with a disability for the first time might decide 'never again'.

He stressed that while the assessors themselves weren't at fault – they were over worked and under resourced – something has to be done to match expectation with delivery.

He said that, bluntly, the Government has to accept that many employers think there is an extra cost – and perhaps an added risk – attached to employing a disabled person.

His idea was for an apprenticeship model for recruitment, whereby the disabled person would be assessed, profiled and tested before they go forward for a job. The agency handling the whole process would remain as the employee's mentor, there to help with any issues that may arise on either side.

People I spoke to also commented on the business of 'review' through Access to Work in one to three years, after which any funding in place could be withdrawn.

In some cases, that could mean employing the person was no longer economically viable, so the job itself was at risk – and the disabled person would then have to start the process all over again.

No wonder, according to government statistics, only about one third of registered blind and partially sighted people are in employment. And it's not just about getting any job, but getting the right job and then keeping it.

Access to Work cost £105m in 2010-2011, 57% of which went to people with visual impairment, but only about 6.5% of the total was spent on assistive technology. That suggests to me that we must be wasting a lot of talent and ability and frustrating a lot of people.

Attitudes must change

The British Assistive Technology Association would like the Government to think again about allowing disabled people to secure Access to Work funding before they apply for a job, something they seemed to be seriously considering in 2010 but no longer talk about.

And we would like to see the Coalition re-thinking the new rules that have shifted the cost of some basic but vital software and equipment to the employers or disabled employees themselves.

We also say it is not enough to suggest that disabled people whose jobs are at risk because of losing their Disability Living Allowance should just apply for Access to Work instead.

As part of our championing of those who use assistive technology, BATA has commissioned a survey into the use of assistive technology in the workplace. Later this year we will be publishing the results and using them to identify what needs to be done. ■

Barbara Phillips is Executive Director of the British Assistive Technology Association (BATA)
www.bataonline.org

Textbook technology

There have been many recent advances in systems to support dyslexia,
but it is still a misunderstood disability, writes Stuart Patterson

Dyslexia is one of the most common, yet least understood impairments that people face. It is defined as 'a disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence and socio-cultural opportunity', according to the World Federation of Neurology.

This is a technical way of saying that dyslexia is nothing to do with intelligence and that conventional teaching cannot overcome the barriers that people with dyslexia face.

This instantly destroys two myths related to the disorder: that it cannot be overcome with hard work and that people with dyslexia have difficulties with intelligence.

Many great and famous people from Bill Gates and Steve Jobs in technology, to Pablo Picasso and Leonardo Da Vinci from the world of art through to Walt Disney, John Lennon, Mohammed Ali, Sir Steve Redgrave and even Ozzy Osbourne have all suffered with dyslexia, and their huge success in their respective fields shows that dyslexia does not stop you from aspiring to greatness.

However, lists like this can at times create the wrong impression in people's minds. Dyslexia for the five to 10 per cent of the population who suffer from it creates huge problems throughout their daily lives, leading to frustration, lack of educational and employment opportunities, which can lead to depression and social challenges.

There is an increasing awareness throughout education of the importance of supporting students with dyslexia and many schools are working hard to support them within the curriculum.

However, there is still a lack of general knowledge around the condition to the extent that the British Dyslexia Association has produced an E-Petition to force changes in initial teacher training to incorporate

Famous dyslexics: from the top anticlockwise, Leonardo Da Vinci, Pablo Picasso and John Lennon

the teaching of dyslexia.

It is also easy for schools to work hard on the reading and writing aspects of the disorder without considering other aspects.

For example, an interaction between children in the playground can have 15 to 20 steps involving many different people. When questioned about an incident it is incredibly difficult for children with dyslexia to order these events in the correct way, which can lead to inconsistencies that can be interpreted as the child not telling the truth.

Advances in technology in the last few years have enabled young people with dyslexia to overcome their challenges in new and creative ways, from specialist software through to the increase in use of smartphones, tablets and ebook readers that offer new ways of supporting dyslexia.

Desktop programs are an excellent way of helping students to develop, whether they be specialised products to help students read and write in a structured way (for example, the excellent Nessy program), or programs to support accessibility and writing such as TextHelp's Read&Write GOLD.

E-readers such as the Amazon Kindle have meant that students have been able to access the same texts as others but are able to alter the text font and size as well as access spoken books in many cases.

This has also linked in with the development of tablet PCs using the Apple or Android operating systems. These have been one of the most rapid areas in the growth of apps, not only to provide new ways of learning but also to aid interpretation of information and organisational aids to ensure that support is in place.

Many schools have adopted these and programs such as Speak it and Eye Reader assist with accessing information as well as Dragon Naturally Speaking to help
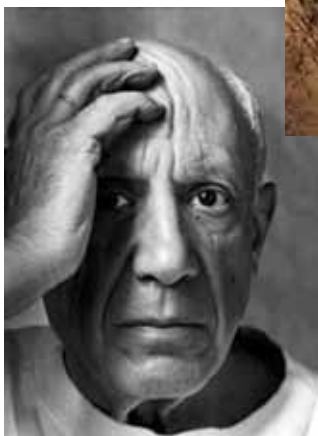
with dictation through text to speech.

A lot of these apps are also used in many smartphones and hand held devices such as the iPod touch, which mean that students have a pocket-sized multi tool to aid them in all different situations, essentially a Swiss army knife for dyslexia.

One thing that is becoming apparent, as the support for young people with dyslexia improves in schools, is that there is a widening of the gulf between what is available in the workplace.

In an increasingly digitised world in which good literacy skills are required, people with dyslexia are facing more challenges to not only get a position but then to move on in that role. Something that is magnified by the high unemployment levels across Britain and beyond.

A study at the University of Leicester showed that their graduates with dyslexia had five main concerns when looking at future employment opportunities:
1. Employers' negative perception of disabilities
2. Obtaining a job
3. Managing their dyslexia in the world of work
4. Adhering to deadlines and meetings in the workplace
5. Being misunderstood (written communication)

These are all legitimate concerns for all people in the workplace with dyslexia and all can be managed by the effective use of technology to aid them.

Supporting employees

Many organisations are now realising the importance of supporting employees with dyslexia. As reported in *Ability* (issue 86 summer 2012), one organisation that has strongly got behind this is the Fire Brigades Union, which is not only lobbying to have specialised software put into every fire station but has also trained many representatives to support and assess colleagues with dyslexia.

Unfortunately not all employers are as supportive. However, the 2010 Equality Act makes it clear that dyslexia is a disability and all employers have a duty to ensure that reasonable adjustments are made for all employees.

At first glance this would appear to reduce employment opportunities; however schemes such as the government's Access to Work scheme mean that many of the financial costs can be offset.

Managing dyslexia in the workplace is a challenge for many people with the disorder. One of the first steps is having a workplace that sees it in a positive light and this comes from an increased understanding of the challenges they face.

This is particularly the case with the hidden elements of dyslexia such as problems with following presentations and organising information.

Workplaces can help staff in simple ways with this such as using bullet points and using larger fonts. These are easy to implement and benefit the whole workforce.

Specialist software can also be very useful. Mind mapping software such as imindmap or one of many online mind mapping programs can help organise information easily. In addition, a simple dictionary and spellchecker installed on a smartphone is an effective aid.

Taking notes

One excellent solution that benefits people with dyslexia is Evernote, an online notetaking program. It is multi-platform, so notes that are created on a tablet or smartphone are automatically synced with a desktop PC.

The main advantage of Evernote is that notes can be written or recorded as sound files. In addition, photographs and video clips can be produced. This means that a record is available for a person with dyslexia to access their information at any time in a format that suits their own individual strengths.

Voice recognition software has often promised a magic bullet to help people with dyslexia to record their ideas easily. There have been large leaps forward in the last few years but the recognition is still frustrating, as anyone who has tried to use a regional accent in a conversation with Siri on the iPhone has found out.

There are half way house solutions though. Audio Notetaker is a program in which sound files are broken down into visual blocks of colour that can be clicked on and listened to as well as trimmed and moved around. This makes it easier for someone with dyslexia to formulate their ideas.

There is little need, with the high level of technology available for people with dyslexia, for them to experience the same level of difficulty in the workplace as there once was.

A visit to the technology section of the British Dyslexia Association's website gives many possibilities that will suit virtually anybody. With an open and frank discussion between employers and employees the challenges that dyslexia presents in the workplace can be overcome, benefitting all. ∎

Word perfect

How a dyslexic student built a business out of his struggle with spelling

Neil Cottrell is a young entrepreneur who turned his difficulty with reading, writing and remembering things into a business that now helps tens of thousands of people with similar disabilities.

In many ways he is lucky; he was identified as having dyslexia when he was 11. His local education authority bought him a laptop and assistive software that included text to speech, mind mapping and calendar programs.

"Reading, spelling, writing and memory were all causing me a lot of issues. I grew up relying on coping strategies," he says. "I was always on the look out for technology that could help me."

By the age of 15 he was having real problems getting ideas down on paper. Despite his enthusiasm for assistive technology he struggled to find the right software to help.

Although many products set out to do the same thing they worked in very different ways.

Cottrell's big problem was spelling. He had a spellchecker, but instead of correcting spellings as he went along it waited until he had finished, leaving him with the job of ploughing through hundreds of spelling errors underlined in red.

"It was very disruptive and I was really having problems composing written work; that was when I began working on the software that became Global AutoCorrect."

The trouble with many spell checkers is that you have to manually confirm each correction, which can take a long time. Cottrell developed a program that would recognise the word that someone wanted to use and automatically correct its spelling.

"You don't see it working. When you type a spelling mistake, instead of waiting it will make that change for you straight away, if it is sure of what you want to say.

"It is very different to a spellchecker and works alongside the toolbox of software you already have."

The £109 program uses phonetics to work out what word a user is trying to spell. It can be used for emails, for essays and reports, and on the web. The software also keeps track of spelling mistakes so the user can work on them in their own time.

It was after completing a psychology degree at Cardiff University in 2007 that Cottrell decided to build a business out of his spelling correction program. He got together £6,000 to start his company, LexAble.

"I am an entrepreneurial person. My main drive was that Global AutoCorrect had really helped me in my studies and I wanted other people to share it."

Although Cottrell wrote the software initially, he now has a team of five people working with him in Wales developing the product.

"We spend an awful lot of time ensuring that customers have millions of auto corrections available to them. Global AutoCorrect works particularly well with longer words."

In the early days, he explains, he and his colleagues had to work hard to tell people about the software. "Then it got to the point that when I picked up the phone people knew about Global AutoCorrect before I started talking about it."

It has become even easier to get the word out after LexAble won a Technology4Good award from the charity AbilityNet earlier this year. It has persuaded larger companies to add its software to their toolkit of assistive technology.

What of the future? An Apple version of the PC software is on the stocks and overseas markets beckon as well with the company on the lookout for opportunities outside the UK.

"We want to cement our position as top dog in auto correction and we also want to expand the business into new markets," says Cottrell. ■

www.lexable.com

Neil Cottrell, inventor of Global AutoCorrect spell checher

Screen tests

Computerised screening is speeding up the process of identifying people with dyslexia

Around 10% of the population have specific learning difficulties, but all too often their impairment is not apparent, either to themselves or others.

Many people reach adulthood without being diagnosed as having dyslexia. Picking up those who may have problems as early as possible and assessing their capabilities is crucial in helping them make the best of their lives.

Techniques for screening people for dyslexia have progressed from paper-based questionnaires – such as the 20-question checklist developed by Michael Vinegrad at Goldsmiths College – to more sophisticated psychometric assessments.

Each year thousands of children and adults undergo computer-based tests that assess their memory, literacy and numeracy skills, but more people with dyslexia and related disorders could be identified by these tools.

Blanket screening of schoolchildren and some groups of adults is vital, say experts in pinpointing people who need help. However, the time and cost involved in testing large numbers is a barrier.

"We have responded to demand from colleges and schools for quicker screening," says Kevin Thomas of Lucid Research, a company that has developed a number of testing programs for different age groups.

Computers make it easier to administer tests and provide instant diagnostic reports. Screening that previously took up to an hour can now be completed in less than half that time and the adaptive software – in which questions depend on earlier responses – also yields more detailed results.

The price of testing has also come down with the emergence of online screening programs such as the British Dyslexia Association's (BDA) Spot Your Potential, which costs under £30.

However, the BDA service comes with a health warning. "It is important to remember that screening only highlights factors that are likely indicators of dyslexia and should be thought of as signposts to further investigation and not as an irrefutable diagnosis," says the BDA.

Others echo the need for professionals to be involved. "We don't do screening without someone sitting down afterwards," says Steve O'Brien, chief executive of the Dyslexia Foundation. "I prefer to do things on a one-to-one basis over a cup of tea. Screening can be quite damaging if it is not done in a professional way."

Professional assessments are also required for anyone applying for grants such as the Disabled Students Allowances or Access to Work, which pay for ICT equipment and human support. Students wanting extra time for exams must also undergo approved tests.

"It usually costs between £300 and £700 for an assessment and screening cannot be used to draw down funds," explains Donald Schloss of the Adult Dyslexia Organisation.

Nonetheless, the growing number of programs available for dyslexia testing mean it is more likely that dyslexia can be picked up early and corrective measures put in place.

We have come up with a list of some of the more widely used tests in the UK. ■

PRODUCT	FORMAT	TARGET GROUP	DEVELOPER	PRICE (min licence)	URL
Dyscalculia Screener	CD, online	5-14 years	GL Education Group	£235 + VAT	www.gl-assessment.co.uk
Dyslexia Adult Screening Test (DAST)	CD, online	Adults	Pearson Education	£179.50 + VAT	www.pearsonclinical.co.uk
Dyslexia Early Screening Test – Second Edition (DEST-2)	CD, online	Young child	Pearson Education	£159.50 + VAT	www.pearsonclinical.co.uk
Dyslexia Screener Digital	CD, online	5-16 years	GL Education Group	£235 + VAT	www.gl-assessment.co.uk
Dyslexia Screening Test – Junior (DST-J)	CD, online	Infant, junior school	Pearson Education	£159.50 + VAT	www.pearsonclinical.co.uk
Dyslexia Screening Test – Secondary (DST-S)	CD, online	Secondary school	Pearson Education	£159.50 + VAT	www.pearsonclinical.co.uk
LADS Plus	Download	15-adult	Lucid Research	£215 + VAT	www.lucid-research.com
LASS	Download	8-15 years	Lucid Research	£140 + VAT	www.lucid-research.com
Lexion Assessment	Download	6-16 years	Frolunda Data	£290.00 + VAT	www.lexion.co.uk
Lucid CoPS	Download	4-8 years	Lucid Research	£115 + VAT	www.lucid-research.com
Lucid Rapid	Download	4-15 years	Lucid Research	£90 + VAT	www.lucid-research.com
The Profiler	Online	Schools, Colleges, the workplace	Do-IT Solutions	N/A	www.doitprofiler.info
Quickscan	CD	14+	Pico Educational Systems	N/A	www.quickscn.com
Spot Your Potential	Online	15+	Lucid Research/BDA	£29.99	www.spot-your-potential.com

Control system gives wheelchair users a smoother ride

Dynamic Controls has rolled out a control system that improves the ride and handling of powered wheelchairs.

The company's LiNX power control system uses load compensation techniques to improve chair control when turning on difficult surfaces, as well as greater stability on sloping surfaces.

In addition to the LiNX system, Dynamic Controls will also be demonstrating the iPortal Bluetooth Mouse Mover, a new version of its iPortal wheelchair interface for accessing iPhones.

This addition to iPortal gives power wheelchair users control of their personal computers and portable computing devices using their power wheelchair joystick or special input devices.

Dynamic Controls' iPortal Mouse Mover allows users to access the web, browse online stores, write documents, pay bills, make phone calls and have control of their computer and the online access from their wheelchair.

In addition, iPortal Mouse Mover can be upgraded via the App store to give users access to Apple iOS devices which can be used to operate environmental controls. ■
www.dynamiccontrols.com

Photoroute London provides a guide to the capital

PhotoRoute London is the first ever, digital mapping system that allows users to download walker-friendly maps onto their phones.

The routes use sat nav and geo located images together with photos, arrows and written directions to pin-point a user's location and guide them through walking routes to London's sights.

"The system takes you seamlessly from start to finish, enabling you to enjoy your surroundings rather than be frustrated navigating quirky London streets," says the company.

PhotoRoute London Lite can be downloaded free from Android's Google Play or Apple's app store to sample routes round London's South Bank.

A premium app can be downloaded for the discounted price of £1.99. The app gives users access to Photoroute London's entire database offline with over 100 routes. ■
www.photoroute.com/

Texthelp bundles its literacy software

Assistive technology firm Texthelp has bundled its literacy and study support software into a single package aimed at school students.

Texthelp Literacy Complete combines existing programs Fluency Tutor, Read&Write GOLD and Web apps. The package will save schools up to £700 per year, compared with buying the software individually.

Fluency Tutor is an online literacy program designed to help readers develop oral reading fluency and improve comprehension while helping primary school pupils advance their reading age. The software helps teachers identify their pupil's reading levels, assess their skills, provide them with a tailored programme and monitor progress.

Supporting secondary level students with literacy difficulties and learners of English as a second language, Read&Write GOLD doubles up as a study and research tool. It features support tools including text to speech, screen masking, dictionary, study skills highlighters, translator and word prediction.

Texthelp's web apps work within browsers (Internet Explorer, Safari, Chrome and Firefox) which students can access from their smart phones, tablets and many other mobile devices as well as PCs and Macs.

The apps include Read&Write Web, eBook Reader, Speech, Dictionary and Spelling.

Texthelp Literacy Complete starts from £495 plus VAT for primary schools and £995 plus VAT for secondary schools. ■
www.texthelp.co.uk

Student Finance England premiers DSA movies

Student Finance England has produced a series of videos that help disabled students through the process of applying for the Disabled Students Allowances (DSAs).

The DSA team at Student Finance England talk students through the process of applying for DSAs. The films also feature contributions from students who currently receive DSA support.

The videos, produced in partnership with assistive technology supplier Microlink, have a sign language function and interactive transcripts.

Students can apply to Student Finance England, part of the Student Loans Company, for Disabled Students' Allowances (DSAs).

These grants help students meet the extra course costs they face because of a disability, mental health condition or specific learning difficulty, such as dyslexia.

"Last year we received over 48,000 DSA applications and we've already received several thousand this year," said Anthony Hill, DSA manager at Student Finance England. "It's important to apply as early as possible for DSA support as we need to ensure the support students receive is tailored to them and their needs." ■

www.sfengland.slc.co.uk/dsa

Welsh voices heard on the web

The trend towards using synthetic voices in local accents and dialects for assistive technology solutions gathers pace.

The RNIB and text-to-speech software company IVONA have just produced natural sounding Welsh language text-to-speech voices.

Developed with funding from the Welsh Government, the new voices mean that people who use screen reading software will be able to access websites, exchange emails or read or write documents in the Welsh language for the first time.

Ceri Jackson, director of RNIB Cymru, said: "For the first time, Welsh language speakers will have equality of access with their English speaking peers in relation to websites and electronic documents.

"With more and more individuals and organisations using the internet to provide information and to communicate with each other, developments like these voices are critical to ensure that blind and partially sighted people have the same opportunities as everyone else."

The voices are available to download free from the IVONA website: **http://welsh.ivona.com** ■

Cheaper speech-to-text for science students

Software company Spellex has introduced technical dictionaries for disabled students using Dragon NaturallySpeaking and other PC and Mac voice recognition programs.

Spellex Dictation dictionaries are available in three versions for students taking bioscience, medical and legal courses. They are sold as add-ons to basic dictation programs.

The software costs £151.47 for a standard Spellex Dictation dictionary and £197.57 for a Gold version. The more expensive product includes spelling correction for MS Office.

Spellex, which has been selling spelling correction software for the past 20 years, claims that its product is cheaper than buying the equivalent specialised version of Dragon NaturallySpeaking.

"Disabled Students Allowances suppliers such as Iansyst and Microlink told us there was a market for more cost effective dictation software," Spellex chief executive Sheldon Drake told *Ability*.

Together the dictionaries contain 300,000 words. Microsoft's English dictionary has only 100,000 words. ■

www.spellex.com

Magic carpet can detect falls

Researchers at Manchester University have demonstrated a 'magic carpet' that can detect falls and may even predict mobility problems.

Beneath the carpet is a mesh of optical fibres that detect and plot movement as pressure bends them, changing the light detected at the carpet's edges.

These deflected light patterns help the system 'learn' an individual's walking patterns and detect if they are deteriorating. The carpet was demonstrated at the Photon12 conference in Durham, UK.

The optical fibre network at the heart of the effort makes use of the same types of fibres that transmit data to homes and across oceans, in which light bounces along the fibres' length.

The developers of the network see its primary use in care homes or hospital wards, to raise an immediate alarm in the case of a fall. ■

Eye tracker relies on optical illusion

A French researcher has come up with a tracking device that turns eye movements into handwriting.

The human eye responds instinctively to surroundings and makes lots of involuntary movements, so using eye tracking to produce handwriting is difficult.

Dr. Jean Lorenceau of the Universite Pierre et Marie Curie-Paris has developed a way of overcoming the involuntary eye movements that most people make.

People tend to make smooth eye movements when they follow a moving object, so Dr Lorenceau uses a flickering optical illusion called reverse phi motion to fool the eye into thinking it is following a moving object.

As a result his tracking system produces voluntary, smooth eye movements.

With a 90-minute training session, a person can use the system to write 20 characters in a minute, Lorenceau says.

Along with letters, people can also use Lorenceau's device to write numbers, words or drawings. ◼

Olympus DP-211 has seven days' recording

The DP-211 is Olympus' latest entry level digital recorder with more recording time, enhanced battery life and a larger screen than earlier models.

The recorder, designed to capture memories and to do lists, boasts a large screen, allowing display content to be viewed easily, and large function buttons to make recording simpler.

The device provides seven days-worth of recording time on its 2GB of internal memory: users have the ability to record everything they need without running out of space. Battery life has also been extended to 80 hours on two AAA batteries.

The Calendar Search feature makes it even easier to find audio files by organising them according to recording date.

The DP-211's Play, Stop and Record buttons are colour coordinated for enhanced ease-of-use.

The recorder enables fast and slow playback for transcription and review with Rewind and Fast-Forward buttons and also has a clearly marked Erase button to prevent accidental data loss.

Noise cancellation and microphone sense settings allow background noises to be eliminated and soft or loud sounds stabilised.

The DP-211 is available now from Maplin, Amazon and Comet online for £39.99. ◼

www.olympus.co.uk

Eye controlled television

Computer eye gaze technology has been applied to television controls by the Chinese consumer electronics firm Haier.

The company's prototype Gaze TV, recently unveiled in Germany, uses Tobii eye gaze systems to change the volume, select channels and make other adjustments to the set.

The TV has a separate sensor unit that monitors a viewer's eye movements and detects when they are looking at particular icons on the set's programme control screen.

The system responds to the length of time they dwell on an icon and the amount of blinking they do.

The technology is still at prototype stage and prone to glitches, but it has the potential to offer an alternative to the traditional remote control, reports the BBC.

"The free Tobii Gaze Interaction software development kit is available to companies interested in exploring the possibilities of gaze interaction," said Tobii's chief executive Henrik Eskilsson. "Using this revolutionary technology they can develop gaze applications that will take part in the future of computing and consumer electronics," said Tobii's chief executive Henrik Eskilsson.

www.tobii.com

Powertel phone has voice prompts

Amplicomms says its PowerTel 710 is the first cordless phone in the world to talk when a button is pressed.

The handset repeats numbers as they are pressed and it can record up to 13 names which are announced when those people call. The phone also spells out names of people stored in its address book.

"The PowerTel 710's voice prompts have been designed to fit the needs of blind and visually impaired people," says the company.

The PowerTel 710 costs £99.99 from the RNIB. ◼

www.rnib.org.uk/shop

Go ON Gold (www.go-on-gold.co.uk) is a national campaign, supported by *Ability*, to raise awareness about the barriers faced by disabled people in accessing computers and the internet, and in helping remove those barriers. You can help by becoming a Digital Champion and helping a disabled person to get online; or your organisation could become a project partner, and help spread the word

11 million disabled people in the UK

- ■ Learning Disabilitiy
- ■ Sight Loss
- ■ Deafness
- ■ Wheelchair User
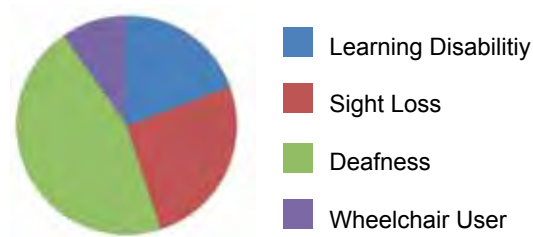
Disability increases with age. Some **6%** of children are disabled, compared to **15%** of working age adults and **45%** of pensioners. *Family Resources Survey 2010/11*
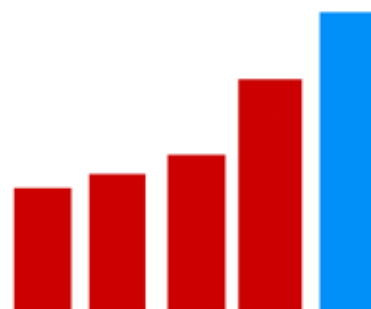
43% of disabled people have never been online

0% None of the 350 central government sites surveyed last year met the middle ranking AA standard on every page

4 out of **5** of private sector websites ignore the basic web accessibility guidlines, says AbilityNet

Go On Gold campaign aims to recruit more than **1,000** gold digital champions

Diary of events

KARTEN NETWORK CONFERENCE
23 October
Queen Alexandra College, Birmingham
The annual get together for the 114 Karten Centres in the UK and Israel involves a conference and exhibition of products and services. Topics under discussion include iPad applications, working with volunteers and safety and security online.
Fees: None
Further information: ceri@karten-network.org.uk

QAC SIGHT VILLAGE LONDON
6-7 November
Kensington Town Hall
This exhibition showcases technology, support and services for people who are blind or visually impaired. Sight Village is run by Queen Alexandra's College in Birmingham.
Fees: None
Further information: www.qac.ac.uk/sightvillage-london/home.htm

LEARNING DISABILITY WALES ANNUAL CONFERENCE
13-14 November
Newport
Learning Disability Wales' conference this year is all about living at home. Speakers include Steve Barnard from Home Farm Trust who will be looking at how personalised technology can help people to become less dependent on others and enhance their quality of life.
Fees: For both days Learning Disability Wales Member £150; non-members £195; people with learning disabilities £52.80; carer supporting a person with learning disabilities £52.80. Single day passes are available at half price.
Further information: www.learningdisabilitywales.org.uk

NADP AUTUMN CONFERENCE: REASONABLE ADJUSTMENT IN EXAMINATION AND ASSESSMENTS
23 November, 29 January
The Strathallan Hotel, Birmingham
Because of the demand for places, this year's NADP conference will be held twice. The topic is reasonable adjustments. Delegates will have the opportunity to take stock of current practice and hear about new and innovative ideas.
Fees: Members £165 (Early-bird £135); non-members £190 (Early-bird £160). The early bird booking deadline is November 30 for the January event.
Further information: www.nadp-uk.org/events

EMPOWERING PARENTS AND CARERS CONFERENCE: SOLUTIONS FOR PARENTS USING ICT
24 November
Sheldon School, Chippenham
The British Dyslexia Association is hosting this free one-day event which will focus on practical solutions for parents in assistive technology in the classroom and at home. Products and solutions will be showcased across a range of functions and will include a number of free and low-cost options.
Fees: None
Further information: www.bdadyslexia.org.uk

RECENT ADVANCES IN ASSISTIVE TECHNOLOGY AND ENGINEERING (RAatE)
26 November
Warwick Conferences, Warwick University
RAatE 2012 is the only UK conference focused on the latest innovations and developments in assistive technology. This conference will be of interest to everyone who uses, works with, develops or conducts research on assistive technologies.
Fees: Day Delegate Rate £150. Exhibitor Rate £300.
Further information: www.raate.org.uk

LEARNING DISABILITY TODAY LONDON EXHIBITION
29 November
Business Design Centre, London
Delegates can take part in a seminar programme, interactive zones and an exhibition of some 70 organisations and projects. Over 3,000 people are expected to attend.
Fees: £25. Free for people with learning disabilities, unwaged and family carers.
Further information: www.learningdisabilitytoday.co.uk, Tel: 0844 880 5061 or email info@pavpub.com.

THE ASSISTIVE TECHNOLOGY INDUSTRY ASSOCIATION (ATIA) CONFERENCE
Orlando, Florida
30 January to 2 February
The ATIA conference, with 150 sessions and an exhibition of new products, provides two and a half days of education on all aspects of assistive technology. This year iPad and app technology dominate the programme.
Fees: Early bird rate September 28 to November 16 $495 for three days.
Further information: www.atia.org

Contacts

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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

Suitability
Services to help employers fill vacancies and disabled people to get jobs. Part of charity Leonard Cheshire Disability.
0845 671 7173
www.lcdsuitability.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

The good sense summit

Kevin Carey finds a refreshing directness in the Commonwealth's approach to accessibility

It is all too easy to fall into a patronising paradigm which says that because some countries are rich and others poor, it follows that the rich are wise and the poor are foolish.

But after two decades of sterile EU conferencing, I attended a Commonwealth Ministerial Summit on accessibility which produced more good sense in two days than has been produced in two decades by the sum total of the European Commission, MEPs, lobbyists and all its 27 member state paraphernalia, not to mention well intentioned, glib and lazy charities.

I suppose the starting point is to get our language straight. When our Government wastes money on constructing massive IT projects that shut out people with physical or cognitive impairments, we dismiss this as a "mistake" or "a waste of money".

We rarely call it "corruption", a misdeed of which we frequently accuse governments in developing countries which waste money although in much more difficult circumstances than those our government faces.

Having got that out of the way, let us get to the substance. First of all, the conference was uncomfortable with vague terminology such as accessibility, usability and, indeed, disability, and was much more interested in talking about whether systems allowed people to complete tasks and the length of time for completion.

Participants thought that manufacturers and designers would be much more sympathetic if they were asked to include a feature that would produce measurable, bench-marked results. And they wanted to think in terms of all their citizen consumers who faced problems with digital information systems including cost, skill and impairment.

On the terminology of disability, I am sure we were all influenced by what appeared to be abstruse Paralympic taxonomical distinctions and it makes sense to classify impairments and identify solutions instead of lumping us all into a disability basket which, after all,

Kevin Carey is Chair of RNIB (www.rnib.org.uk), and Director of humanITy (www.humanity.org.uk)

abandons our carefully argued thesis that we live with impairments that society converts into disabilities.

One question we will all have to answer is how much energy are we prepared to expend on social acceptance of clear, simple, honest, useful language.

Secondly, there was a ground swell of support for defining a core of features that would widen citizen consumer access such as magnification, text adjustability, speech-to-text and text-to-speech.

Compared with asserting vague general rights, this looks possible. And these countries, all but Malta not in the European Union, said they would be prepared to consider using import restrictions, public procurement and service licensing agreements to achieve minimum access specifications. While our regulatory framework is somewhat different, we could certainly learn from that.

Thirdly, and relating to my point about waste, ministers in particular seemed to be aware of the economics of the access proposition, seeing their shut-out people as wasted assets, a rhetoric widespread in the EU but leading to no substantial change in the years of economic boom. Choosing between the hard-heads and the soft-spoken, I'm more inclined to trust the former.

Finally, the willingness to learn from each other, a strong Commonwealth tradition, marked the whole dynamic of the conference. Again, it's something that we talk about in Europe but its only product so far has been joint EU funded projects between academics more interested in their grant leverage than what it produces for people like us.

Or, to put it another way, what has an EU research project ever done for you? The level of collaboration between third sector organisations in the EU isn't even pathetic. We deserve to be ignored, as we largely have been.

All of which leads to a sequence of steps we need in order to do better: establish one place for pooling sovereignty, as opposed to information, on issues of citizen consumer access to digital information systems; agree concrete bench marks and targets; agree on prioritisation; and, armed with national accord, make deals with our European cousins and transatlantic and Asian manufacturers.
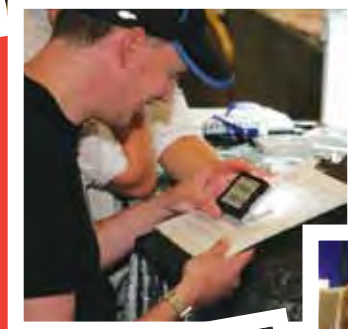
Put like that, it all sounds easy. It won't be, of course, but it will be better than going on as we are. ■