



Emerging technology

VoIP and deaf people

When VoIP (Voice over Internet Protocol) was planned to replace the conventional PSTN telephone system in Simon Pearce's office, he was not too concerned – until he realised that his handset would be replaced and that his hearing aids did not work well with the new handset. His experience is likely to be mirrored in many workplaces as the popularity of VoIP increases.

VoIP (Voice over Internet Protocol) is making a huge impact in voice telephony and is likely to come to a phone near you soon. VoIP call charges may be cheaper than those available on conventional (PSTN) systems. It is also more flexible and can offer many advanced features.

However, VoIP is based on Internet technology and can perform very differently from conventional systems. This is good and bad news for deaf people.

VoIP and hearing aids

In a worst case scenario, hearing aid wearers may experience feedback when using a VoIP phone. More commonly, they may find that their hearing aid is not compatible with their VoIP phone and they gain no benefit using their T-switch. They may also be unable to control amplification and audio quality. If they are lucky, they may actually experience better quality sound, but this is unlikely to happen by chance.

“Much depends on the voice coder and the capabilities of the terminal or handset you are using,” explained Bill Pechey, Vice Chair of TAG. “If you use a PC or laptop there can, in theory at least,



be some flexibility in the coder, defaults and the headset used. But some VoIP systems use dedicated handsets which may or may not be compatible with hearing aids. Fortunately, some current VoIP systems enable users to plug in their preferred PSTN handsets.”

In the longer term, there is potential for VoIP to make telephone communication easier for people with a hearing loss. VoIP can send much more information than conventional phone systems, so there is a theoretical possibility of transmitting frequency ranges that are more readily heard by individuals with a hearing loss. A trial planned by BT and NDCS will investigate the feasibility of providing a better acoustic experience for people with a hearing loss with VoIP (see page 3 for news of a BT special project).

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TAG's newsletter about deaf people and telecoms, broadcasting and electronic communications.

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VoIP and textphone users

Using text on VoIP systems might seem straightforward, but it is anything but if you are using a conventional textphone.

It is quite likely that a textphone will not work at all on a VoIP connection. If you do obtain a successful connection, it may fail mid-conversation. If the VoIP system is in the workplace, it may not be possible to connect to the 18001 BT TextDirect number.

“The emerging VoIP situation is very complex,” commented Bill Pechey. “There are so many possible variations in VoIP set-ups that deaf people will probably just have to try out systems to see if they work. Using an old-fashioned PSTN line may be the best immediate solution if problems are encountered.”

Guido Gybels, Director of New Technologies

at RNID and TAG member, added: “The good news is that if a deaf person cannot use a new VoIP phone system at work, he or she is perfectly entitled to ask for a PSTN line to get around the problem. The cost will be trivial to a business and a perfectly acceptable adaptation under the provisions of the Disability Discrimination Act.

“But the long-term answer is native IP real-time text solution. At RNID we are developing TalkByText which is computer-based and already is available for use on a PC Windows desktop and mobile phones. We plan to make it available through the web for use by any computer through a web browser. Its design will enable it to use lots of additional features that become possible through IP communications. Through a gateway, it can also make and receive calls to and from PSTN phones.”

ACCESS EQUALITY

When a free calls offer led to a ten-month headache

Ten months ago, when textphone user and TAG member Christopher Jones saw the BT Broadband Talk offer of free or cheap calls, a huge smile appeared on his face. Today, he grimaces when he remembers what followed and wonders if other deaf people have had similar experiences.

The BT Broadband Talk offer of free calls to 01 and 02 numbers plus better than normal BT rates on many other calls suited me very well, writes *Christopher Jones* of TAG. I signed up and looked forward to cheaper telephone bills. When the first bill arrived I saw that my hearing partner was getting free calls, but that my own text calls going via TextDirect were being charged at full rate!

I challenged BT saying that I was being discriminated against. BT suggested that I withhold payment until the situation was investigated. The investigation

took several months as BT, BT Broadband and BT Broadband Talk appeared to be "passing the buck" from one to another. At one stage, I was offered a one-off payment to settle the issue but I refused that on principle.

I then approached BT Age and Disability. They took up the issue and told me that I could use my textphone on the BT Broadband Talk line. I was also offered a paltry £50 compensation to cover the previous over-charging and the many hours of calling the three different helpdesks!

A few weeks ago I checked my online billing and discovered that

I was still being charged for the free calls through TextDirect! Apparently, their billing department hadn't been programmed to filter out free calls. I'm still waiting to see if the mess has now been sorted out.

VoIP services like BT Broadband Talk can obviously bring huge benefits. But I do wonder if textphone users will always benefit. Textphone technology often requires special features that may slip through billing systems. We must be vigilant to ensure that we have equality of access.



NEW TECHNOLOGY

Geemarc Screenphone

A new screenphone for use with relay services like Typetalk has been developed by Geemarc in partnership with the RNID. Priced at £199 (ex VAT), the Geemarc Screenphone looks and acts like a standard amplified phone, but it also has a reasonably-sized screen (125mm by 80mm) which can



display text in various font sizes. It is straightforward to use and suitable for people who want to voice their call, but read the reply of the Typetalk operator.
www.geemarc.com

IN BRIEF

Signing on mobiles

Deafax has been trialling signing on mobile phones. Users have been developing one-handed signing, since they need their other hand to hold the phone!

Parliament subtitled

A channel popular with many deaf people, BBC Parliament, is changing from quarter-screen video format on Freeview to full screen from November 13, in time for the state opening of Parliament two days later. BBC Parliament on Freeview will be accompanied by a BBCi digital interactive service, plus subtitles.

Subtitling to increase

Ofcom says that the number of TV channels providing access services (like subtitles) must increase from 74 to 91 in 2007. The lowest target for digital channels will then be set at 35% of output.

No news is ... no news

An ITV news bulletin was left without subtitling earlier this year when its live link to the subtitlers in Australia broke down. This was the second such occurrence and TAG has now received assurances that a second line has been installed to prevent a re-occurrence.

STOP PRESS

Ofcom has just published the feasibility study of additional telephone relay services. See www.ofcom.org.uk/research/telecoms/reports/relayservices/

WebCapTel

In January 2007, Teletec plans to launch WebCapTel in the UK. It uses a combination of telephone and Internet connections to provide word-for-word, real-time text captions for telephone conversations. The caller logs onto the website and enters their phone number and the number they want to call. WebCapTel connects to the caller, dials the other party and provides the text of the conversation in a window on the caller's Internet browser. PCs, PDAs and smartphones can be used with the service.
www.teletec.co.uk

Muses MP3 and phone loop

The Muses 801 Bluetooth headset adaptor with a CL iLoop neck loop allows hearing aid wearers to listen to music on personal audio devices like MP3s without missing phone calls. When the phone rings, the music is interrupted to allow voice calls to be taken. The headset adaptor is a portable wireless communication device with inbuilt Bluetooth technology. Cost: £71.96 (ex VAT).
www.deafequipment.co.uk

Can VoIP give better quality audio?

BT is running a trial with NDCS to see if high definition sound can help people with a hearing loss using BT Broadband Talk, Softphone and Videophone.

Hi-definition Sound (Hi-dS) can be provided on VoIP (Voice over Internet Protocol) systems because of the high transmission rates – more information and therefore wider frequency ranges can be sent and received

if both callers are using VoIP systems with the same or similar coding and protocols. Some of these new frequencies may benefit hearing impaired callers and the trial aims to explore the possibilities.

NDCS is looking for more volunteers for the trial – contact Richard Vaughan e richard@ndcs.org.uk t 020 7490 8656 (v/t)

Me & my noise-cancelling headphones

Simon Pearse

Although I enjoy listening to music on my iPod it can be quite hard especially when I travel to work in and around London because of the background noise. I have to turn up the iPod volume very loud to drown it out. And that can't be a good thing for my residual hearing! When I was in the US, I saw a pair of Bose noise-cancelling headphones. Although they were quite expensive, they were about half the UK price! So, I thought I'd try them.

What I really like about them is that I can wear them with or without my in-the-ear hearing aids as they cover the whole ear. They might look a bit strange, but they keep my ears warm in the winter.

Now I can lower the volume of my iPod and can actually hear more of the music. However, I do have to turn the volume down on one of my hearing aids



TAG member Simon Pearse with his noise-cancelling headphones.

because of the noise-reduction effect. It's a good idea to try before you buy in case they don't quite suit your situation.

Noise-cancelling headphones don't cut out all background sound, but they do mask a lot of the uncomfortable noise.

At first the headphones took a bit of getting used to but I really appreciate them now and they are very handy on trains, tubes and buses. When I take them off, I am amazed at how loud the background noise is. I believe they give my ears a welcome break.

Jargon buster

PSTN – the fixed-line phone system that has been around for decades. PSTN = Public Switched Telephone Network.

VoIP – new phone system based on Internet technology. VoIP = Voice over Internet Protocol.

3G – advanced mobile telephone system, with **4G** hot on its heels. They both cope well with picture, video and multimedia. 3G = third generation; 4G = fourth generation.



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TAG's birthday prize

TAG will be 21 years of age in 2007. Plans are afoot to celebrate its achievements and, more importantly, to set an agenda for the future.

As part of its activities, TAG will award a cash prize of £25 for the best short article or opinion about telecoms, broadcasting or e-comms. If you would like to present your article in a format other than text, please contact TAG to make arrangements.

A lot has happened since 1986 when TAG was founded, so you could tell us about how your life has changed in that time as a result of technological advances or about your communications hopes and aspirations for the future.

Send your entry to Ross Trotter (contact details above right). The closing date for entries is 31 January 2007.