



Responsive Home moves to the new campus at the University of York



Lounge with technology for connecting people.



Kitchen showing aids for blind and partially sighted people.

The New space allocated for the CUHTec demonstration home in the new Computer Science Department has now been furnished with assistive technology demonstrations. CUHTec is looking for further demonstrations from industry and researchers.

The Responsive home has two main purposes. First, it is a space for demonstrating what people want from the technology in their homes through research prototypes and off-the-shelf products. These demonstrations are used in our courses for telecare providers. They are also used to communicate the results of our research to visitors from industry, government and the media. The second purpose is as a laboratory for research. Much of our research is carried out in the field, e.g., in people's homes, but sometimes we need a homely but controlled laboratory space for experiments and user testing.

Current demonstrations include:

- Door entry and security, key safe and motion detection (donated by Supra UK)
- Conventional telecare, connection to call centre (donated by Tunstall), floor mounted strip as alternative to pendent (donated by T-cubed); solutions for blind and partially sighted (donated by Tunstall).
- Cooking aids for blind and partially sighted people, talking appliances, talking labels (from the RNIB).

- Assistance for people with dementia, a reminiscence aid (donated by T-cubed), cueing activities of daily living (poster describing research).
- The appropriation of games technology, Wii-habilitation.
- The appropriation of mobile technology, iPad and iPhone health apps.
- Connecting families across continents, TimelyPresent.

Andrew Monk, director of CUHTec commented: "We are very lucky to have this fantastic new space on this very futuristic expansion to the University of York campus. We have moved some of the demonstrations from the old Responsive Home but mostly we are looking for new ones. If you have anything that you think demonstrates a possible solution to a real need that older people or others have for technology in their homes please contact me (A.Monk@psych.york.ac.uk)"

M-care: are smart phone apps the new low cost assistive technology?

The built-in features of modern smart phones can be used as assistive technologies to support the independence and Quality of Life of vulnerable people. These low-cost, downloadable applications, or "apps" enable the camera, the microphone, the accelerometer, the GPS receiver and the touch-screen, to be used for specific assistive purposes. They are capable of providing useful support to a range of vulnerable groups including people with sensory disabilities, diabetics, and people suffering from mental health problems, epilepsy or communication issues. It is likely that m-care services using smart phones will be offered in tandem with home telecare services to extend the independence of the service user from the home to the outside environment.

M-care (or mobile care) involves multi-faceted support for independence and well-being for people wherever they happen to be. Thus, m-care offers an opportunity of extending telecare services from the confines of the home and into the world at large where the majority of people spend a great deal of time, both at work and for the leisure activities which benefit their Quality of Life. Mobile telephones can become assistive devices through software downloads without having to change their appearances in order to benefit people with a disability of any form. This has the potential to remove the stigma that can be associated with assistive technology by embracing the principles of universal design and allowing disabled people to use identical devices to people who don't have to overcome challenges to their independence.

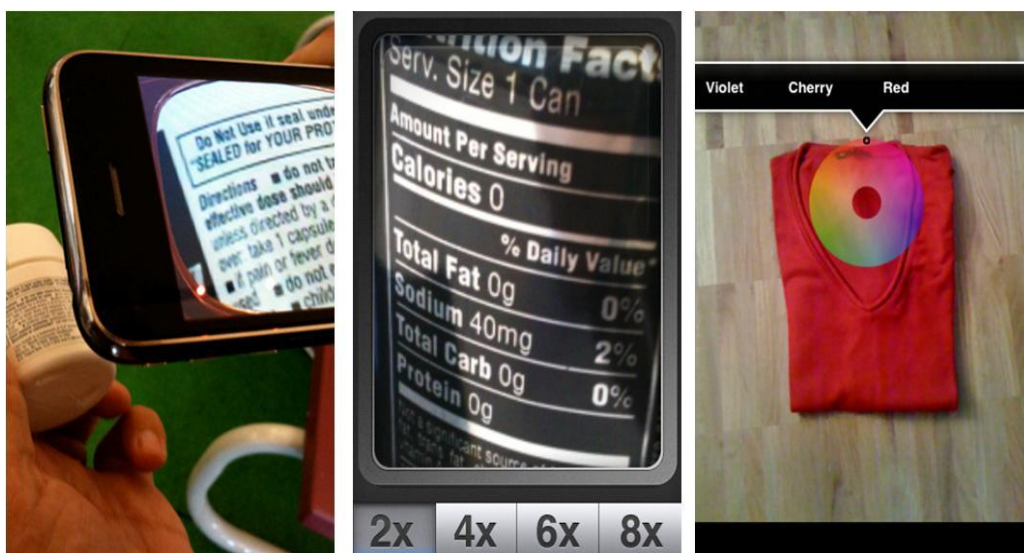


Figure 1 Screenshots from Eye Glasses and Retina Apps

Smart phones give their owner access to vast libraries of software know as apps that use the features of the phone such as the camera, the microphone, the accelerometer and GPS. Many of these apps are purely for entertainment but there are a growing number with more serious uses. Some examples are given below.

There will soon be nearly 2 million people in the UK with a visual disability, many of whom have cataracts and age-related macular degenerative disease. Many other older people struggle to read small print and to see the outlines of shapes. Good lighting, magnifying glasses and speaking devices can help to compensate for their deficiency. Figure 1 shows screenshots from a smart phone using the digital camera to enlarge labels for easy reading, and to identify the colour of objects by comparison with a standard palette. This can also help the 8% of people who are believed to be colour blind. Other apps can be used for prescribing reading glasses and to identify objects. Similarly, It is estimated that there are 8.7 million people with a hearing impairment in the UK but less than half are prepared to wear an electronic hearing aid at all times. Many have not been properly tested, perhaps as a result of the difficulties in having a test performed. The Uhear app is a clever self- administered test that can be used for digital hearing aid prescriptions. However, a separate device may not be needed if the SoundAMP app is employed to amplify speech and to make it clearer. It has a 30 second replay button which allows the user to hear again the words that they might initially have missed. Screenshots from these apps are shown in Figure 2.



Figure 2 Screenshots from the Uhear and SoundAMP Apps

There are many other apps for physical health and fitness monitoring and information, mental health monitoring and treatment programs also AAC type applications that can speak for you (see ProLoQuo2Go). The possibilities seem limitless. The role of smart phone apps to extend telecare and telehealth into the world outside the home will need to be considered by existing service providers especially as they take on the challenges of personalisation and an increased use of a retail model for community equipment. The technology has matured quickly and with a greater emphasis on individuals making their own service arrangements for everything from domiciliary care to meals provision. Providers must be agile in embracing the opportunities to make technology more popular.

Abstracted from "SPAs (Smart Phone Applications)– a New Form of Assistive Technology" by Kevin Doughty, publication in Journal of Assistive Technologies; Volume 5, No. 1 (2011).

For further details contact: dr.k.doughty@btinternet.com

CUHTec Courses:

Adapting your Telecare Service to new Financial Circumstances 2 February and 3 March, 2011

The course will show you how to demonstrate the true cost and potential savings to be made through using Assistive Technology and Telecare. We will also consider examples of imaginative uses of telecare and emerging new technologies that present opportunities to reduce the cost of community care packages. The course is structured around four such opportunities:

- Re-ablement after a medical crisis
- Person-centred technologies for people with learning disabilities
- Reducing the need for domiciliary care
- Services for clients who only need standalone equipment

Each of these opportunities will be considered in turn and delegates will be guided through the process of costing and justifying a service, as it might be set up in their organisation. This course is for service development and strategy managers, operational staff and others with responsibility for telecare service planning, delivery or commissioning. This includes primary care organisations, social landlords and other groups who provide support services for vulnerable people.

The course will be led by Kevin Doughty and Andrew Monk of the Centre for Usable Home Technology at the University of York, and will be limited to 12 places. It will consist of short talks, exercises and discussions.

For further details about this course or to make a booking, please visit <http://www.cuhtec.org.uk/events> where a booking form is available or contact:

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Fees for all our courses in 2011 are CUHTec Full Members: One delegate - £180.00, two or more delegates - £150.00 per delegate, Associate and Non-members: £295.00 per delegate.

CUHTec Regional Telecare Forums

South Wales/South West England, hosted by Newport City Homes (January 27th, 2011, 11am to 3pm)

North West England/North Wales, hosted by Liverpool City Council (22nd March, 2011, 11am to 3pm)

Midlands, hosted by Worcestershire County Council (24th March, 2011, 11am to 3pm)

Scotland/North East England, hosted by Middlesbrough Council (15th June, 2011, 11am to 3pm)

CUHTec regional telecare forums are half-day events aimed at service providers at all levels. They provide an opportunity for CUHTec members (full and associate) to get together to exchange ideas and experiences with fellow professionals in the region with the emphasis on sharing best practice in telecare. Each forum targets specific subjects for discussion based

on recent feedback from members in the area and is facilitated by Kevin Doughty of the Centre for Usable Home Technology.

These forums are free of charge to full members and £50 per person for associate members.

Please contact Jenny Parry, CUHTec Administrator (tel; 01904 433178 email; cuhtec@psych.york.ac.uk) if you wish to attend any of these forums.