Technology Radar: BusinessLab's review of technologies that are making the news, October 2009

An *ActiveAge* Report

Infection disease tracker

HealthMap is a freely available website which puts together information about the spread of infectious diseases, their symptoms and the effect on humans and animals. HealthMap has an integrated Google map with pop-up information and news from all over the World about spreading infections. The website enables users to zoom in and out on the map and find information about the disease for a specific geographical area.

This website gathers reliable data from a variety of sources including Google News, The World Health Organization (WHO) and authorised personal accounts (Such as proMED). HealthMap is a project, which was part funded by Google inc. and other organisations including The Canadian Institution of Health Research, The Centre of Disease Control Prevention (CDC) and The National Library of Medicine (NLM).

HealthMap recently announced a new application for the iPhone (3G) called Outbreaks Near Me. This enables users to receive an alert when an outbreak is occurring in their area. The application also enables users to report an outbreak via his or her iPhone.

Although one can imagine potential problems with such an application, for example, if unqualified individuals are reporting outbreaks without accurate information, this technology could be beneficial for those suffering from long-term illnesses and older people with weaker immune systems. The application could alert such individuals or their carers that more caution should be taken when the individual is out and about in public.

For more information visit:
http://www.healthmap.org/en

Touchable 3D images

In 2002 the film 'Minority Report' presented a picture of what the World might be like in the year 2054. One of the most startling things about this film was the degree to which technology had advanced to include mid-air displays projecting floating images in free space.

However, 7 years on from production of the movie much of the imaginary technology is far closer than we ever imagined it would be.

A research team from the University of Tokyo recently developed a system, which can produce touchable 3D images. For this to happen three main elements are required. These include holographic display, tactile display and hand tracking.

This technology produces floating images via a holographic display, which are similar to what you may experience watching a 3D movie. The difference in this latest development is that the user can now experience touching these images. To detect the user's motion the system uses an infrared camera, similar to the camera that is used by the Nintendo Wii. In order to touch the 3D image the user attaches a retroreflective marker to his/her middle finger. This helps the infrared camera sense the 3D position of objects. When the user touches the image, the system recognizes the motion and utilizes a nonlinear phenomenon of ultrasound, which produces pressure on the area of the finger touching the image, making the user feel the physical presence of the object.

This technology has only been tested for simple objects but scientists are planning to use this for a variety of purposes such as virtual switches in hospitals where the transmission of infection by touch is an issue.

We can only predict that technology such as this will start to change various aspects of our lives. For example, we may see the introduction of virtual pets, or friends, to help reduce loneliness amongst people who are isolated for a variety of reasons.

For more information visit:
http://www.alab.t.u-tokyo.ac.jp/~siggraph/09/TouchableHolography/SIGGRAPH09-TH.html

LG unveiled the world's first Touch Watch Phone

Earlier this year LG Electronics introduced the World's first Touch Watch Phone, which was introduced to the UK market in September 2009.

This new Touch Watch Phone has similar features to other 3G phones including the ability to send text messages, and make voice calls. The difference with this phone is that it has been designed to be worn around the wrist like a watch.

Some of the advantages of this phone are that it is not easy to misplace, lose or forget because it is worn around the wrist and attached to the individual at all times. It also has an additional purpose: to tell the time and it is easy to see how this could be of benefit to anyone with memory problems or who doesn't want to carry around a mobile phone.

This phone has a user-friendly screen with built-in voice recognition, which makes it easier to make calls without the need for a mobile keypad.

The phone has a text-to-speech (TTS) application, which enables the user to listen to a text message rather than have to read it, which can help anyone with poor eyesight.

One application that could potentially be added to the phone-watch is GPS tracking. Adding GPS could be of great benefit for individuals suffering from dementia and their carers. If the individual suffering from dementia often wonders off, the carer could track where he or she is via the phone-watch.

Although this phone has not been designed with the above function in mind, it is possible that features such as GPS could be integrated and therefore provide a discrete way of remote monitoring.

For more information visit:
http://www.lge.com/about/press_release/detail/21062.jhtml

http://newsroom.orange.co.uk/2009/08/20/orange-brings-the-watch-phone-exclusively-to-the-uk/

Transformable Bed-wheelchair robot

Panasonic Corporation, one of the top market leaders in electronics technology and innovation, recently announced the development of a bed-shaped robot which can be transformed from a bed to a wheelchair and vice versa. Panasonic exhibited this robot for the first time at the 36th International Home Care and Rehabilitation Exhibition on the 29th of September in Tokyo.

The aim of this product is to bring more secure, safe and comfortable living for those who have limited mobility and require a person to lift them from their bed to a wheelchair or vice-versa. This robot takes direct commands from the user and is able to convert the bed into a wheelchair without the assistance of another person. This transformable robot also helps to reduce the risk of falling and other injuries to the user, which often result from moving around.

This technology could be beneficial for carers and for individuals with disabilities. It allows greater independence for the individual and reduces the burden on the carer. It could also potentially reduce the number of care staff required for a single individual, hence saving costs for local authorities.

For more information visit:
http://panasonic.co.jp/corp/news/official.data/data.dir/en090918-2/en090918-2.html