

Health Sector News

Eye movement control of bedside screen

Airwave Healthcare is to market in the UK a system that will enable patients that, for instance, due to a stroke, other brain, or spinal injury, have significantly reduced motor function, to access and control television, radio, Internet, and nurse call functions, on an Airwave healthcare touchscreen, simply by looking at part of the screen.

The company has entered an agreement with Swedish eye tracking and 'gaze interaction' specialist, Tobii, which will see Tobii PCEye Go eye tracking hardware and software available with Airwave's bedside touchscreens. The specifier can choose which functions – for instance access to TV and radio channels, the Internet, hospital information, and patient entertainment services – are integrated.

Tobii explains that the 'idea' of eye tracking arose from a research project at the Royal Institute of Technology in Stockholm; Tobii was founded in 2001, and has significantly developed and enhanced the technology since. It adds: "The Tobii PCEye Go is a peripheral eye tracker that enhances computer accessibility with the speed, power, and accuracy, of gaze



interaction. The device replaces the standard mouse, allowing users to navigate and control a computer using only their eyes."

The PCEye Go runs on standard Windows computers and tablets; users can work with any application normally controlled by a standard computer mouse, or through touch. Patients could thus, for example, 'surf the Web', access and change television channels, obtain information on key hospital services, 'Skype' or even control the room lights, blinds, or ventilation. They can also use the technology to communicate with clinicians and nurses. Tobii added: "Users

with limited motor skills can benefit greatly."

The Gaze Selection software gives control of the desktop or tablet device via an 'intuitive' two-step process that reduces the risk of unwanted clicks, while 'zoom' functionality gives 'virtually pixel-precise control' of where users point, click, and drag. The PCEyeGo hardware device is lightweight, and small enough to be easily transported and used with different computers. All processing is undertaken on the device itself, which 'fits snugly' on a desktop or laptop computer screen or, with an optional bracket, can be used with a standard, 'off-the-shelf' tablet.

Hector Minto, sales and business development manager, UK/Eire at Tobii, added: "The partnership with Airwave is extremely exciting for Tobii in the UK. The first hospitals who will install the system actually came to us with the requirement for eye control in their bedside consoles. Spinal and rehab wards are likely to be early adopters. However, it is very likely that the 'facility' for eye control will become commonplace for many more patients than just those with a severe physical disability."

Cover Story

Rada's relationship grows with Blackpool Hospital

Rada, the 'pioneers in mechanical and cutting edge digital washroom technology', is supplying its washroom controls to Blackpool Teaching Hospitals NHS Foundation Trust.

This year has seen Rada thermostatic taps and showers supplied extensively as part of the Trust's ongoing commitment to providing patients and staff with purposefully designed, efficient, washroom and showering facilities.

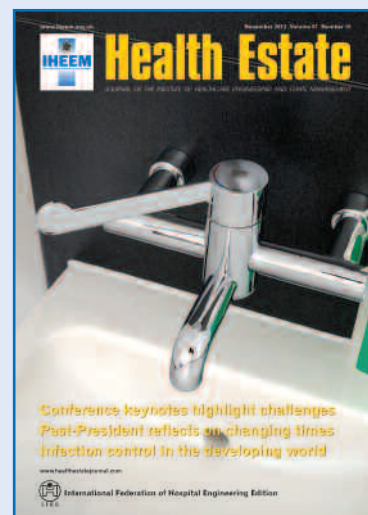
One recent project saw Rada V12 showers, Rada Thermostat-3s and wall-mounted Rada Safetherm units installed at the Stroke and Observation Unit at Blackpool Victoria Hospital.

Rada V12 shower valves regulate flow to allow for increased water savings, and are Buildcert TMV3 scheme approved. The exposed V12 option features Rada's Insutech technology, which reduces the surface temperature to a safe level to avoid excessive heat and resultant

scalding – providing additional peace of mind in hospitals, where products may be used by vulnerable individuals.

Rada's wall-mounted Buildcert TMV3-approved Safetherm clinical taps with Insutech technology were also installed in large numbers. Their innovative design minimises water retention in the body and spout 'for improved bacteria control', while a sequential long lever control ensures easier use under hospital protocols. Safetherm products are also widely specified in healthcare settings for their serviceability and ease of maintenance without having to remove the panel or tap assembly.

Bill Haughton, technical officer at Blackpool Teaching Hospitals NHS Foundation Trust, said: "Our relationship with Rada goes back many years. This consistency enables us to access ongoing specialist support, and provide the highest quality products and systems for our facilities."



Geoff Heyes, Rada's commercial specification manager, added: "Rada is delighted to be a partner of Blackpool Victoria Hospital."

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Air conditioning systems 'in breach of the law'

The Government is 'in serious danger of killing off the air conditioning inspection regime', Bob Towse, head of technical and safety at the Building & Engineering Services Association (B&ES), has said.

While the European Energy Performance of Buildings Directive (EPBD) requires inspection of all UK air conditioning systems in buildings with a cooling capacity of over 12 kW, he claims 'fewer than 5% actually have been', meaning 'the vast majority' have been in breach of the law for at least two years.

He adds: "Apart from the potential legal



penalties, building owners and managers are missing out on the energy efficiency benefits flagged up by the inspections." The B&ES says all such systems installed on, or after, 1 January 2008 should have been inspected within five years of installation, with older systems over 250 kW output inspected by January 2009, and others above 12 kW by January 2011.

"Very few building owners are even aware of their legal responsibility, while local authorities – who are charged with enforcing this law – are not doing a great job," Mr Towse points out.

Two-date event focused on lighting

'Lighting in the NHS is often over five years' old, on 24 hours a day, and based on inefficient technology. However, now LEDs and smart controls can deliver dramatic energy savings – while improving the environment for staff and patients alike.'

So say the organisers of LuxLive 2013, reportedly the UK's biggest lighting exhibition, being held from 20-21 November at Earls Court, London, and free-to-attend (to register, visit: www.luxlive.co.uk/register)

Organisers, Revo Media, said: "By replacing old, inefficient lighting systems with modern alternatives, NHS and other healthcare facilities can slash their energy bills, and reduce their CO₂ emissions, while ensuring a suitable environment for diagnosis, treatment, and patient recovery.

"Last year estates managers and engineers from many UK NHS Trusts attended LuxLive. The event is a 'must'



for anyone responsible for the lighting and energy management of healthcare facilities."

LuxLive will bring together 'leading manufacturers of low energy lighting for healthcare', including Philips, Cooper, Dextra, Tam-lite, and Trilux, with over 180 exhibitors.

Seventy hours of free-to-attend talks will focus on exemplar projects, 'drilling into key technologies', and debating problems faced by the sector in a dedicated panel discussion.

New outpatient department

The final phase of works to relaunch and refurbish the outpatients' department at the BMI The London Independent Hospital, with improved patient waiting areas and consulting rooms, has been completed.

The new second floor facility, at a hospital that treats some 6,500 patients annually, offers improved patient waiting areas and consulting rooms.

The development of the second floor outpatients'



department is the second phase of a three-part development plan which has already seen £500,000 invested in the past year, with a newly launched physiotherapy department and gym. The new outpatients' department offers improved facilities,

19 consulting rooms, and bespoke facilities for specialties including cardiology, gynaecology, and neurophysiology. It will also be home to the hospital's private GP service.

News in brief

Preventing *Pseudomonas*

Delegates attending a one-day conference on 'Preventing *Pseudomonas*', being held by the Water Management Society on 3 December at the Drayton Manor Hotel in Tamworth, are promised 'useful and thought-provoking case studies, advice on prevention strategy, a legal perspective, and international guidance from the experts'. Keynote speaker, Professor Hans-Curt Flemming (of the Biofilm Centre at the University of Duisburg) will present on the results of a collaborative research project on biofilms in drinking water installations. For more information, visit: www.wmsoc.org.uk

Improving water system safety

The new BEAMA Water Safety and Hygiene group has now been launched, and incorporates the Thermostatic Mixing Valve Association. The group will advise on best practice installation, use, and maintenance, of products that improve safety and hygiene for water systems. Alongside thermostatic mixing valves, the product scope now includes taps and showers, backflow prevention devices, and balancing, isolating, and pressure-reducing valves. CPD training is now being developed, adding to existing activities that include online technical advice, engagement with industry bodies, and development of best practice guides.

Pursuing procurement excellence

The Chartered Institute of Purchasing & Supply (CIPS) has signed a partnership with The International Institute for Advanced Purchasing & Supply (IIAPS) to develop a new Masters-level qualification for procurement and supply professionals. The CIPS said: "This unique qualification in strategic sourcing will bring together the expertise of IIAPS with CIPS' awarding body status to create world-class professionals sought after by businesses and organisations around the world. On completion they will be awarded the post-nominal letters ExDip."

Help cut cost of operating buildings

BSI has launched the BS 8544 Guide for lifecycle costing of maintenance during the in-use phase of buildings. It says the costs incurred in maintaining buildings following their construction 'are often not fully realised'. The new guidance is designed to enable facilities managers, quantity surveyors, clients, and owner-operators, to run their operations effectively, and help them estimate the long-term costs of ownership/operation.

NHS Trusts shine at official launch of Sustainability Day

NHS Trusts and healthcare organisations from across England assembled in London on 17 October to witness the official launch of NHS Sustainability Day 2014, which IHEEM is supporting, and for which *HEJ* is the official media partner

The launch, held in the Great Hall at Barts Hospital, began with a welcome from Trevor Payne, director of Estates and Facilities at Barts Health, and the brainchild of the Day for the past three years, after which Rick Walker, CSR senior manager, NHS England, spoke on the corporate social responsibility the organisation has to support sustainable healthcare. There followed presentations by the award-winners at last year's NHS Sustainability Day, including a compelling case study by Lancashire Care Trust, on how its community sustainability programme had supported patients and those with mental health issues, and a presentation by University Hospital Southampton NHS Foundation Trust on 'Anaesthesia-related electrical energy use and anaesthetic gas scavenging'.

Following a further case study from



Barking, Havering and Redbridge NHS Trust, Andy Jones, national chairman of the Hospital Caterers Association, discussed 'the urgent need to re-address the way we source our food and how it is packaged in hospitals', and Carillion described its work with Barts Health in both environmental performance and community programmes.

The presentations concluded with Deputy Chief Medical Officer, Professor David Walker, explaining how the Department of Health is focusing on sustainability in healthcare, and the good practice examples it is seeing from across Europe.

'More intelligent infrastructure'

Schneider Electric says its new StruxureWare for Healthcare software suite provides organisations with 'a comprehensive view into their integrated healthcare facility', enabling them to improve energy savings, infrastructure efficiency, patient safety, 'and more'.

The software 'integrates key offers' from the company 'to create a more intelligent healthcare infrastructure'. The company said: "By ensuring the right information gets to the right people, at the right time, the software helps healthcare organisations improve financial performance, patient safety, staff productivity, hospital security, and the environment of care, via an efficient infrastructure."

Providing 'an alternative approach to driving optimised performance, while conserving resources', the software offers 'robust integration and interoperability' between power, IT room, building management, and security systems.

Leading the global technology race

On a mission to understand the life sciences eco-system which exists in Leeds between industry, NHS, and academia, the Rt Hon David Willetts MP, Minister for Universities and Science, visited medical equipment specialists, Brandon Medical, on 26 September.

Greeted by managing director brothers Graeme and Adrian Hall (pictured with him second from right and far left respectively, with Medilink Yorkshire & Humber PR director, Jason Brannan, far right) at Brandon's new 50,000 ft² manufacturing facility, he toured the company's audio-visual digital operating

room to learn more about its high definition and surgical lighting technologies. He also saw the R&D laboratories where all product design and developments are conducted in-house, Brandon's product training school, and its advanced manufacturing facilities.

On meeting the Brandon Medical team, David Willetts said: "I've seen remarkable examples of innovative solutions to complex medical problems today, which are not only helping to benefit people's health, and improve their quality of life, but are also keeping the UK at the front of the global technology race."



Shedding a light on surgery

Daray manufactures a range of surgical lighting products which use both LED and halogen light sources to cater for surgeons' varying demands.

The SL400 series is one such range available in both lighting formats. Adding flexibility, the arm can be rotated by 360°, and can be wall or ceiling-mounted – either as a single or double head, or a free-standing mobile unit.

All SL400 models offer up to a 160,000 lux lighting level with variable intensity, easily controllable via a digital user interface. The range also has a Colour Rendering Index (CRI) of more than 95 to filter out infra-red heat, and provide the most effective light to operate under, plus 'excellent shadow reduction'. An integrated camera option is available to enable recording of aspects of a procedure, for instance for using as a teaching aid.

Daray also offers the wall or ceiling-



mounted SL700 LED surgical lighting range, with both a single and double head, a lux level of 160,000, and a CRI of over 95.

With the additional benefit of touchscreen control, the SL700 LED series has a variable colour temperature of 3,600-5,500, with an automatic focus. Ten grades of brightness can be remembered and digitally controlled, while an auxiliary light source is included to aid laparoscopic operations.

New AE development programme

IHEEM and Eastwood Park announced at last month's Healthcare Estates show the launch of a 'new and refreshed' Authorising Engineers' development programme.

The AE assessment programme delivers an evaluation process through IHEEM for those wishing to register as a healthcare engineer. Having recently reviewed the current programme, IHEEM decided a more formal assessment process that took into account competencies and knowledge was needed.

Eastwood Park is currently working closely with IHEEM to develop this, and plans to introduce the new AE programme during 2014. It is expected that the programme will also be extended eventually to include Authorised Persons.

IHEEM Chief Executive, Julian Amey, said: "We are confident that the revised process will be robust, yet straightforward. It should truly take into account the competencies, and acknowledge the experience, of all disciplines of AE. It is a fully supported programme, and will be of real value to Authorising Engineers. Where additional knowledge or skills are required, recommendations will be made on training or mentoring support, which will be available from IHEEM, Eastwood Park, and other providers."

The AP/AE development programme will be rolled out for Authorising Engineers working in decontamination first and then, it is anticipated, it will follow across all other disciplines, moving thereafter to Authorised Persons.

Passive House standards met

Airflow Developments says its new Duplexvent Multi Line range is the first fully customisable range of indoor and outdoor commercial MVHR (mechanical ventilation with heat recovery) units to achieve Passive House standards.

Featuring 'attractive and practical styling', and designed for ease of installation, the units offer up to 95 per cent heat recovery efficiency thanks to the latest counter flow heat exchanger technology, to 'significantly reduce heating bills'. Further benefits include a maximum specific fan power (SFP) of 0.33 W/m³/h, air leakage of under



3 per cent, and automatic bypass, air circulation, and frost protection facilities. The units also incorporate 'exceptional' casing insulation (30 mm) to avoid thermal bridging and maximise thermal performance.

All the units can be '100 per cent customised', allowing

bespoke configuration; specifiers can configure spigot connections, filters, and built-in heating and cooling options.

The units can also be controlled via the Internet, thanks to the Duplexvent Motion Blue Control System, which can link into building management systems, and from various mobile devices.