

STORIES ABOUT HOW OUR TECHNOLOGY IS BEING USED

INNOVATION HUB

Edition 1 | 2013

ARM[®]

THE ARCHITECTURE FOR THE DIGITAL WORLD[®]

Innovation Hub

is updated every quarter and is fully approved by all featured partners

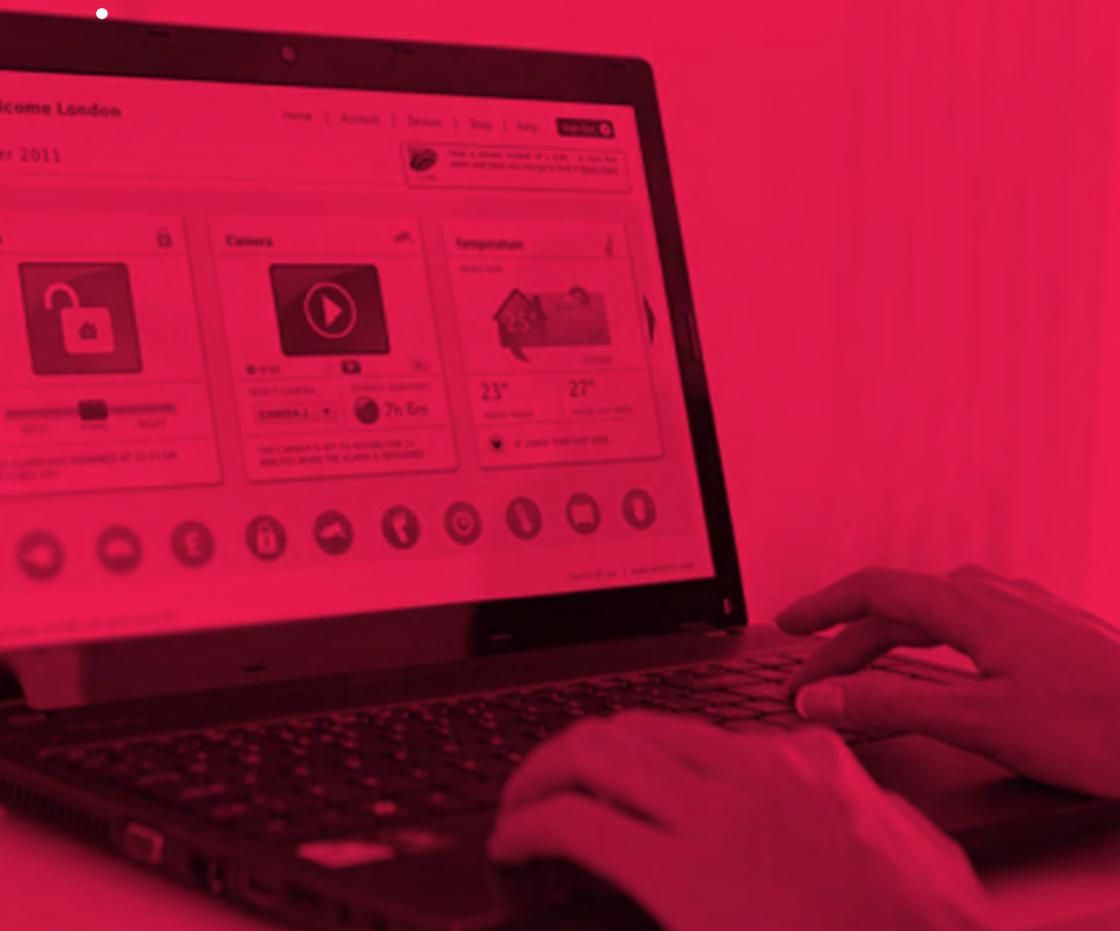


Contents

- 2 AlertMe
- 4 Talking Book
- 6 ArmAssist
- 8 Eykona 3D Camera



AlertMe puts the home in the cloud. It enables consumers to monitor, control and intelligently automate their homes



AlertMe

Key Insights

- Smart home market valued at US\$60bn by 2017 (Juniper Research)
- 150 million smart home nodes focused on energy management projected to be shipped worldwide by 2017 (IMS Research)

Technology Inside

AlertMe uses a multi-protocol home gateway with ARM9™ processor-based technology that communicates with home devices incorporating ARM® Cortex®-M3 processors.

AlertMe

AlertMe is an affordable platform that enables consumers to monitor, control and intelligently automate their home.

It combines connectivity for devices in the home, with a cloud service and applications which can be accessed anywhere via smartphone. Users can control their heating, security systems, utilities and lighting.

AlertMe provides personalized insight through advanced data analytics using both specific user data, compared to other users and combined with third party data such as demographics and the weather.

Organization/Future

AlertMe is based in Cambridge, UK.

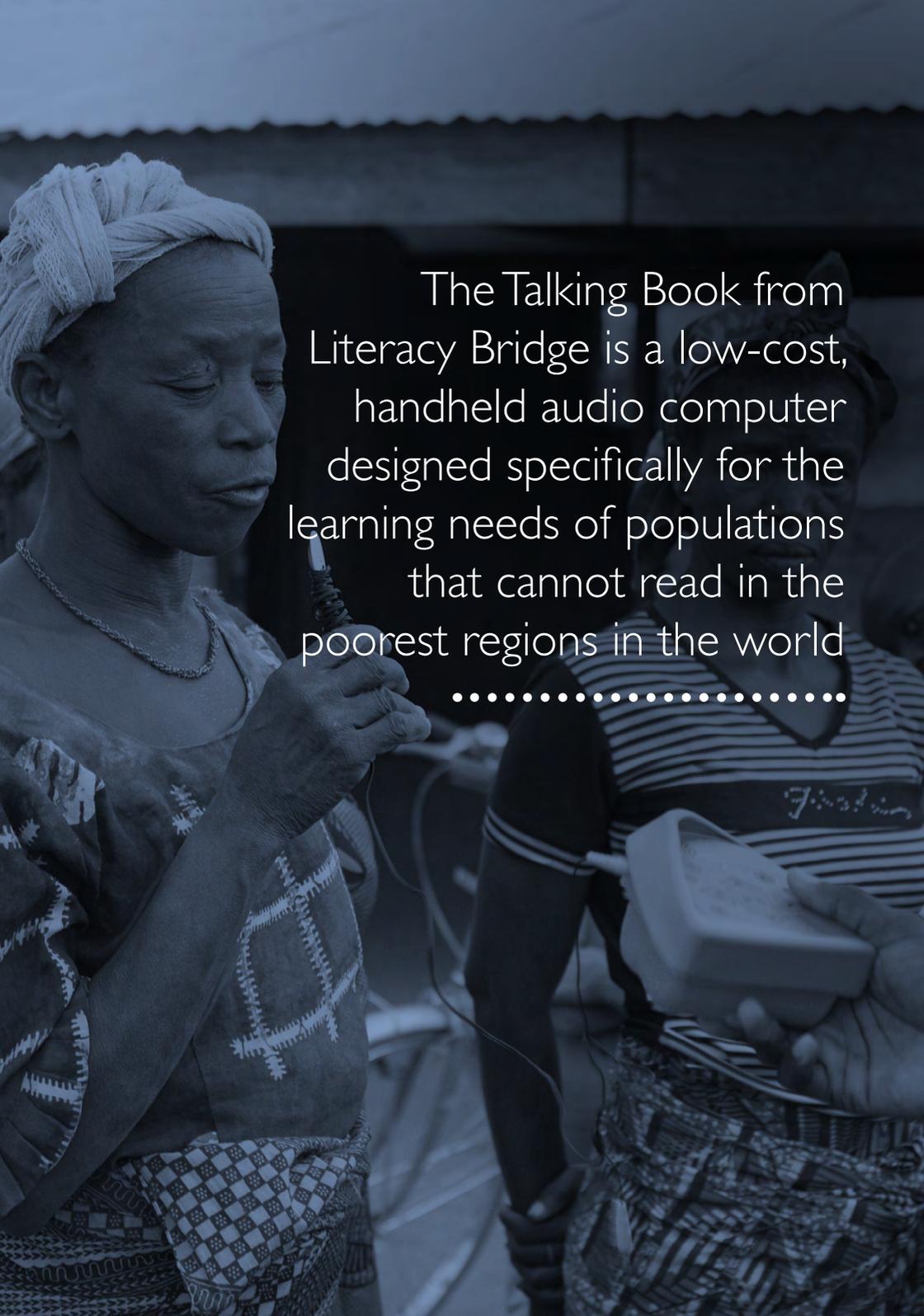
AlertMe has already launched its hub-based services through British Gas in the UK and Lowes in the USA.

British Gas security starter kit retails at £199. Lowe's Iris safe and secure kit retails at \$179.

AlertMe's goal is to reach mass market consumers in key markets and territories by working with tier one utilities, telecommunications communications companies and retailers.

www.alertme.com





The Talking Book from Literacy Bridge is a low-cost, handheld audio computer designed specifically for the learning needs of populations that cannot read in the poorest regions in the world



Talking Book

Key Insights

- 15% of rural households in Sub-Saharan Africa have no access to grid electricity and 1.5 billion people worldwide have no access to electricity (International Telecommunication Union)
- 22% of all illiterate adults live in Sub-Saharan Africa (UNESCO, 2012)

Technology Inside

The Talking Book utilizes an ARM® Cortex®-M0 processor. Devices are powered by two, zinc-carbon, size-D batteries which provide 12-15 hours of typical use. Recordings are stored on an internal microSD memory card while the built-in speaker enables group listening.

Talking Book

Applications allow users to engage with the device, providing simple and actionable messages in addition to multiple choice quizzes to aid learning about health and agriculture.

Information on soil preparation, planting and fertilizing are conveyed by the local Ministry of Food and Agriculture office.

Piloted in 2009 in the Upper West Region of Ghana, results highlighted that farmers who had access to Talking Book had an average increase in crop production of 48%.

Organization/Future

Literacy Bridge is based in Seattle, Washington.

With the support of the University of Michigan's Electrical Engineering and Computer Science Department, Literacy Bridge aim to bring the cost of the device from around \$30 to \$10.

www.literacybridge.org



ARM

The ArmAssist is a robotic device designed to rehabilitate stroke victims and enable therapists to evaluate their patients through video games



ArmAssist

Key Insights

- One in six people will suffer a stroke
- A stroke can strike anyone at any time, regardless of age
- Stroke survivors can regain their quality of life with appropriate care and long-term support (World Health Organization)

Technology Inside

The ArmAssist is built on a 32-bit Flash microcontroller from STMicroelectronics® STM32™ family, based on the ARM® Cortex®-M3 processor.

ArmAssist

The device is worn on a patient's arm and measures the movement of the shoulder and elbow through an orthosis or orthopedic brace.

Patients can interact with two forms of games via the computer connected to the base of the device. Short evaluation games analyze the movement, force and precision of the arm movement. Longer cognitive games such as puzzle and memory can help motivate and improve coordination.

Patients will be sent home with an ArmAssist to continue a rehabilitation program under the remote supervision of a therapist via the internet.

Organization/Future

Backed by FIK and TECHNALIA Research Centre in Spain, the ArmAssist has been piloted in the La Fe Hospital in Valencia and Barcelona's Guttman Institute.

The technology has been patented and licensed with exclusive rights to commercialize and sell in Spain.



The Eykona 3D camera builds three dimensional images of wounds and uses software to measure the area, volume and color with extreme accuracy



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Wound Measurement System - Camera

769-3013 - ISS 2

Eykona 3D Camera

Key Insights

- Total advanced wound care product market is worth \$16.3bn in 2023 (Visiongain)
- Chronic wound care has been estimated to cost the National Health Service in the UK as much as £3bn a year. (DH, 2010 & Posnett, 2007) While roughly 80% of this figure is attributed to delayed healing and wound complications (Drew, 2007)

Technology Inside

The Eykona 3D camera has an 800Mhz ARM® Cortex®-A8 processor and is one of the first certified medical products in the field to use a Digi ConnectCore Freescale™ i.MX51/Wi-i.MX51 based system-on-module.

Eykona 3D camera

The camera creates detailed 3D models of any wound or scar from which accurate measurements of length, width, area, color, and most importantly volume can be made.

Using the systems rendering software, a 3D model can be assessed from all angles and shared with other doctors and clinicians through server or cloud based hosting.

Medics are able to quickly assess both acute and chronic wounds and review how they are healing, allowing adjustments to the treatment plan accordingly. With previous methods, this is often difficult as chronic wounds such as leg ulcers and pressure ulcers can heal slowly.

Organization/Future

Eykona are a medical company based in Oxford, UK.

The Eykona 3D camera is currently in use by the Queen Elizabeth Hospital in Birmingham, UK where military casualties receive treatment on return from Afghanistan.

The Eykona 3D camera is priced at less than £5,000 including the software.

Eykona forecast the UK market alone could be worth more than £20m while the camera could save the healthcare service around £300m a year.

www.eykona.com



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