Smoothboard: A Smart Alternative

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Abstract

Transforming any surface into a user-friendly interactive whiteboard is usually associated with the purchase of expensive technology. Smoothboard is an inexpensive alternative that was first promoted at a T.E.D. [Technology, Entertainment, Design] conference on YouTube by researcher Johnny Lee in April 2008. Johnny Lee's demonstration of Wii Remote hacks; bending the low-cost game piece to power an interactive whiteboard, or a multi-touch surface, was an instant hit with viewers.

The Smoothboard software, when combined with the Wiimote, enables users to interact with their computer directly either at the screen, or away from the screen on almost any surface.

This poster presents the Wintec School of IT adaptation and promotion of this affordable technology.

Keywords

Smoothboard, Blue Tooth, Wiimote, Interactive Whiteboard

Introduction

The authors of this poster became aware of Johnny Lee's YouTube demonstration of Smoothboard and his other Wii Remote hacks in August 2010. Within a week the potential of this technology was demonstrated in a classroom, using a locally constructed Infrared [IR] pen and having downloaded and installed the required software onto a laptop.

The authors have promoted the potential use of this technology in education to a number of teachers in primary and secondary schools and in tertiary institutions. Their demonstrations have also included the provision of free IR pens, sponsored by the Wintec School of IT.

Content

Smartboards [Interactive Whiteboards] have been available to teaching institutions for a number of years, but are often

difficult to justify when having to pay approximately $3000 for equipping each classroom. In 2008 Johnny Lee demonstrated that this sophisticated educational tool could be built out of cheap parts. His combination of an IR pen [$10] with a Wii Remote [$60] and free software resulted in an interactive whiteboard for a fraction of the usual cost of this technology.

The Smoothboard setup requires a laptop with wireless Bluetooth enabled and the Smoothboard 2 software installed, together with a projector and an IR Pen [fig 1].
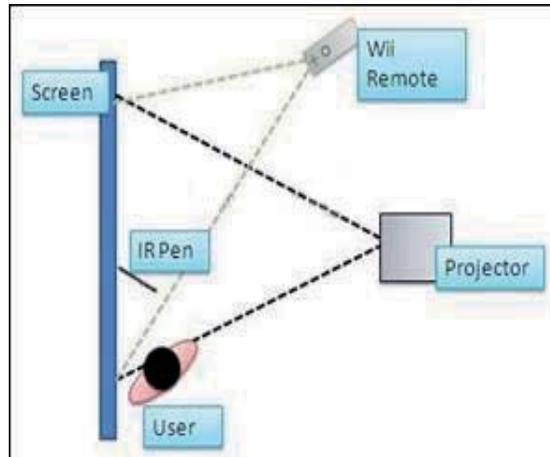

Figure 1: Smoothboard Hardware Configuration

The technology was unveiled to a group of Waikato secondary school ICT teachers at a scheduled cluster group event in September 2010. Although some of these teachers were aware of the technology none had previously seen it demonstrated. While they were suitably impressed, only one teacher has taken up the offer of a free IR pen in order to enable the technology in one of the school's computer labs.

The technology has also been demonstrated to teachers in two Hamilton primary schools. One has since installed the technology and is using it on a regular basis, much to the enjoyment of the children in her year 1 class.

Conclusion
The uptake of this technology to date has been low, but it is working well for the teacher of a Year 1 class in a local Hamilton primary school. The IR pen has been redeveloped into a wand device by the Wintec School of IT technician. The wand is better suited to small children who have to reach up to interact with the multi-touch wall surface.

The authors continue to promote Johnny Lee's invention whenever suitable opportunities arise.

References
References should be in the APA format, examples of which are shown.

T.E.D. http://www.ted.com/talks/johnny_lee_demos_wii_remote_hacks.html (Retrieved April 2011)

Smoothboard http://www.smoothboard.net/ (Retrieved April 2011)