Keynote

A New You: From Augmented Reality to Augmented Human

Jun Rekimoto
The University of Tokyo
Sony Computer Science Laboratories, Tokyo
rekimoto@acm.org

ABSTRACT
Traditionally, the field of Human Computer Interaction (HCI) was primarily concerned with designing and investigating interfaces between humans and machines. The primary concern of Surface Computing is also still about designing better interfaces to information. However, with recent technological advances, the concept of ”enhancing”, ”augmenting” or even ”re-designing” humans themselves is becoming a very feasible and serious topic of scientific research as well as engineering development. ”Augmented Human” is a term that I use to refer to this overall research direction. Augmented Human introduces a fundamental paradigm shift in HCI: from human-computer-interaction to human-computer-integration. In this talk, I will discuss rich possibilities and distinct challenges in enhancing human abilities. I will introduce recent projects conducted by our group including design and applications of wearable eye sensing for augmenting our perception and memory abilities, design of flying cameras as our external eyes, a home appliance that can increase your happiness, an organic physical wall/window that dynamically mediates the environment, and an immersive human-human communication called ”JackIn”.

ACM Classification Keywords
H.5.1 Information Interfaces and Presentation: *Artificial, augmented, and virtual realities*

BIOGRAPHY
Jun Rekimoto received his B.A.Sc., M.Sc., and Ph.D. in Information Science from Tokyo Institute of Technology in 1984, 1986, and 1996, respectively. From 1986 to 1994, he worked for the Software Laboratory of NEC. During 1992-1993, he worked in the Computer Graphics Laboratory at the University of Alberta, Canada, as a visiting scientist. Since 1994 he has worked for Sony Computer Science Laboratories (Sony CSL). In 1999 he formed, and has since directed, the Interaction Laboratory within Sony CSL.

At Sony CSL, Rekimoto initiated and has led the ”Real-World User Interfaces” project since 1994. This project produced several notable research accomplishments, including NaviCam (a situationally-aware mobile assistant), Pick-and-Drop (a direct-manipulation technique for inter-appliance computing), Multiple-Device Digital Whiteboard, Augmented Surfaces, and TimeScape (a time-machine user interface environment). Some of these are being commercialized in Sony’s VAIO personal computer series.

Rekimoto’s research interests include computer augmented environments, mobile/wearable computing, virtual reality, and information visualization. He has authored dozens of refereed publications in the area of human-computer interactions, including ACM, CHI, and UIST. One of his publications was recognized with the 30th commemorative papers award from the Information Processing Society Japan (IPSJ) in 1992. He also received the Multi-Media Grand Prix Technology Award from the Multi-Media Contents Association Japan in 1998, the Yamashita Memorial Research Award from IPSJ in 1999, and the Japan Inter-Design Award in 2003. In 2007, He elected to ACM SIGCHI Academy.

ITS 2014, November 16–19, 2014, Dresden, Germany.
ACM 978-1-4503-2587-5/14/11.
http://dx.doi.org/10.1145/2669485.2670531