Symposium on Mobile Graphics and Interactive Applications Fact Sheet

Director: Mark Billinghurst, University of Canterbury, New Zealand
Chair: Börje Karlsson, Microsoft Research Asia, China
Conference: Tuesday 19 November – Friday 22 November 2013
Exhibition: Wednesday 20 November – Friday 22 November 2013

Fast Facts

- The SIGGRAPH Asia 2013 Symposium on Mobile Graphics and Interactive Applications program received 84 submissions, more than in any of the previous editions of SIGGRAPH Asia.
- A total of 37 submissions were accepted, making the overall acceptance rate 44% of the total submissions received. A total of 13 accepted submissions were from Asian countries such as Hong Kong, Japan, Singapore, and South Korea.
- This year's program will see a total of 16 presentations, 18 demonstrations, 2 case studies, and 1 tutorial presented at SIGGRAPH Asia.
- A much broader range of submissions were received this year, with a focus on mobile augmented-reality as well as low-level mobile graphics and rendering techniques, and mobile interaction.
- Previously known as the Symposium on Apps in 2011 and 2012, the program has since been renamed the Symposium of Mobile Graphics and Interactive Applications.

A Quote from the SIGGRAPH Asia 2013 Symposium on Mobile Graphics and Interactive Applications Director:

"In previous years (2011 and 2012), the program was called the Symposium on Apps. This year, we changed it to the Symposium on Mobile Graphics and Interactive Applications to reflect the broader focus on both graphics and interactive applications, as well as encourage diversity of submissions.

The high number of submissions received this year has enabled us to expand the program from one day to two, and have a comprehensive program line-up of presentations, case studies, and demonstrations. Through this, attendees will be exposed to some of the most innovative mobile graphics in interactive applications available. Whether it is the latest in mobile augmented-reality, graphics-rendering techniques, interactive games or Google Glass applications, attendees will see research that will inspire them in their own work, and enable them to learn things that they will not otherwise be able to learn elsewhere."

SIGGRAPH Asia 2013 Symposium on Mobile Graphics and Interactive Applications Program Highlights

- **Cyclo – A Personal Bike Coach Through Glass (Presentation)**
  Gábor Sörös, ETH Zurich
  Florian Daiber, DFKI Saarbrücken

Tomer Weller, Shenkar College of Engineering and Design

Cyclo is a concept prototype of a personal assistant for bike training using Google Glass. It uses a hands-free user interface that is potentially more convenient to use than traditional speedometers, and provides instant performance feedback and context-based notifications overlaid on the biker's view.

- **Smartphone Base Robot (Demonstration)**
  M.K. Lau, The University of Hong Kong

  This demonstration shows how an innovative robot can be developed by using a smartphone to be the brains of the robot. Smartphones have a powerful processor, various sensors, different connectivity, and intuitive user interface for user setup and operation. These can be leveraged as the basis for a powerful mobile robot platform.

- **Konashi: A Physical Computing Toolkit for Smartphone and Tablets (Presentation)**
  Reo Matsumura and Takao Watanabe, YUKAI Engineering Inc.
  Yuichi Tadokoro, Tokyo Institute of Technology

  Konashi is a physical computing toolkit tailored for smartphones and tablets. It is designed to be easy to understand for designers who are not engineers, and to allow them to easily build physical computing applications. The Konashi input modules allow designers to add a wide range of sensor input to smart phones and tablets.

- **Mobile Virtual Archery (Presentation)**
  Daniel Drochtert, Laurid Meyer, Konstantin Owetschkin, and Chris Geiger, University of Applied Sciences Düsseldorf

  In this presentation, a system is created to allow it to attach a mobile phone to a real archery bow for use in a simulation system for archery training purposes. The goal is to provide a believable archery experience and support users in practicing the motion sequence of traditional archery in a virtual environment. To provide a realistic haptic feedback they used a real bow as the interaction device and equipped it with a dedicated damping system. Integrated sensors help to detect drawing and releasing of the bow, aiming at a virtual target and moving the user's point of view according to the real user movements by using the sensor data of the smartphone.

- **Can You CopyMe?: An Expression Mimicking Serious Game (Presentation)**
  Chek Tien Tan, Natalie Harrold, and Daniel Rosser, University of Technology, Sydney

  CopyMe is a touch-based tablet game that provides a conducive, engaging, and effective platform for the emotional development in children, especially for children with autism. It is based on state-of-the-art facial expression tracking and recognition to enable real-time performance feedback during gameplay. Children are shown face expressions on the tablet and then earn points by trying to copy the expressions.

- **Markerless 3D Gesture-based Interaction for Handheld Augmented Reality Interfaces (Demonstration)**
  Huidong Bai, Lei Gao, Jihad El-sana, and Mark Billinghurst, The University of Canterbury

  This presentation will showcase a novel interaction method that is based on identifying the positions and movements of the user's fingertips, and mapping these gestures onto corresponding manipulations of the virtual objects in augmented-reality environments. Users can hold the handheld device with one hand while controlling augmented-reality virtual objects with the other hand. Specifically, users can use a pinch-like gesture with thumb and index fingers in six-degree-of-freedom (6DOF) in mid-air to manipulate virtual objects in 3D space on handheld augmented-reality devices.

Full information about the Symposium on Mobile Graphics and Interactive Applications program can be found on http://sa2013.siggraph.org/en/attendees/symposium-on-mobile-graphics-and-interactive-applications.html.

For more information about SIGGRAPH Asia 2013 program updates, please visit http://sa2013.siggraph.org.