

Fact Sheet – Emerging Technologies

Chair : Masahiko Inami, Keio University, Japan
Co-Chair : Cuntai Guan, Institute for Infocomm Research, A*STAR, Singapore
Conference : Wednesday 28 November – Saturday 1 December 2012
Exhibition : Thursday 29 November – Saturday 1 December 2012

The SIGGRAPH Asia 2012 Emerging Technologies program is a popular forum for presenting a wide range of new and interactive technologies from all over the world.

Fast Facts

The Emerging Technologies program received a total of 59 submissions. Out of these, 24 pieces were accepted and will be on display at SIGGRAPH Asia 2012 in Singapore.

Some of the institutes contributing to Emerging technologies this year include MIT Media Lab, Keio-NUS CUTE Center, Sony Corporation, The University of Tokyo, National Taiwan University and Osaka University. With participation from 12 countries and regions, this year about 80% of the submissions were from the Asia Pacific region, along with some from the USA, Canada and Europe.

Quote from the SIGGRAPH Asia 2012 Emerging Technologies Chair, Masahiko Inami, Keio University, Japan

"SIGGRAPH Asia 2012 will showcase a diverse set of works, which are come from many disciplines such as interactive graphics, display technologies, haptic devices and robotics. I believe this year's Emerging Technologies will not only showcase high-tech interactive demonstrations, but will also act as a catalyst enhancing future collaboration and technological innovation across a wide range of research fields. In the world of interactive technology, we strongly think, 'trying is believing'. Therefore, I sincerely hope attendees will try every work, perform subjective evaluations, and share their impressions with the demonstrators."

SIGGRAPH Asia 2012 Emerging Technologies highlights:

- **Cryptone**, Masami Hirabayashi and Motoi Shimizu, Institute of Advanced Media Arts and Sciences

Cryptone enables interaction between the performers and the audience in music performance venues. Sound IDs consisting of high frequency DTMF are used for communication between devices. Cryptone is easy to use in sound performances and can enhance the music entertainment experience.

- **Second Surface**, Shunichi Kasahara, MIT Media Lab and Sony Corporation, Valentin Heun, Austin Lee, and Hiroshi Ishii, MIT Media Lab

Second Surface is a novel multi-user augmented reality system for real-time collaboration. With this system, users can create and place three dimensional drawings, texts and photos on the augmented spatial canvas located in the everyday environment, and share generated contents with co-located users.

- **ASIBO**, Yuichiro Katsumoto, Keio-NUS CUTE Center and Masa Inakage, Keio University Graduate School of Media Design

ASIBO is an expression device that changes its behavior depending on the switching frequency. ASIBO looks like a pile driver and performs like one, but it shifts its behavior when the user switches frequency of the motivity solenoid rapidly. ASIBO can be used as an actuator for toys, musical instruments, and marionettes.

- **Tagtool**, Thomas Pintaric, Mathis Csisinko, Ferdinand Pilz, and Martin Norden, Attentive GmbH, Markus Dorninger, Josef Dorninger, and Matthias Fritz, OMAi GmbH

Tagtool is a collaborative virtual workspace for visual expression. The system runs on off-the-shelf tablet computers, allowing users to create animated projection paintings.

- **Flying Head**, Keita Higuchi and Jun Rekimoto, The University of Tokyo

Flying Head is a flying telepresence robot, which synchronizes a human body's motion with that of a robot through the use of an unmanned aerial vehicle. The operator can easily manipulate the telepresence UAV using body motions such as walking, looking around, and jumping.

- **Augmented Satiety**, Takuji Narumi, Yuki Ban, Tomohiro Tanikawa, and Michitaka Hirose, The University of Tokyo

Augmented Satiety realizes modifying the perception of satiety implicitly and controlling our nutritional intake interactively according to the meal and its nutritional value by changing the apparent size of food with augmented reality.