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SIGGRAPH Asia delivers a digital feast with an Asian flavor

Emphasis on the latest in computer graphics and interactive techniques, including aspiring works from 31 countries globally

Singapore, 30 November 2009 – SIGGRAPH Asia returns this year, with a broader array of the latest innovations, technologies and techniques set to wow audiences in the region. Having successfully made its debut in Singapore last year, SIGGRAPH Asia 2009 will be staged in Pacifico Yokohama, Japan from 16 to 19 December 2009.

With more than 8,000 participating industry luminaries, practitioners and entrants expected at the show, SIGGRAPH Asia 2009 aims to stamp its position as the authoritative platform to showcase the future of computer graphics and interactive techniques in the region and beyond. This year's show will feature pieces within hot fields in the industry such as robotics, digital signage as well as gaming and interactive techniques.

Aspiring innovations

In line with SIGGRAPH's aim to provide opportunities to budding entrants and inspire creativity within the digital domain, SIGGRAPH Asia's **Technical Papers** program, a premier international forum for presenting new research in computer graphics and interactive techniques, will continue to focus on the hottest topics permeating the computer graphics world. Shortlisted from a total of 274 submissions, these include the conversion of sketches to realistic Internet image montage, shadow art and photo-realistic rendering, geometric and urban modeling, as well as GPU algorithms.

Furthering its promotion of breakthrough ideas, SIGGRAPH Asia 2009 will introduce the **Digital Bazaar**, showing new and transformational technology within the industry. Not unlike marketplaces found across Asia, the Digital Bazaar offers visitors a hotpot of exploratory ideas and products from independent technopreneurs, start-ups and aspiring digital artists. This first-ever edition of the Digital Bazaar will feature 13 exhibitors, 80 percent of which are from Japan.

These innovations include:
- **Real-time server-side 3D rendering platform for the web** which delivers on the long-anticipated 3D Internet experience, demonstrated by FMAD from Japan.
- The launch of an **ultra low-cost robot with interactive video capabilities** that can be **directly controlled via Skype and the iPhone**, by Hong Kong's Globalactive.
- Interesting iPhone applications aided by **augmented reality for mobile graphics**, by Ubiquitous Entertainment Inc. from Japan.

Learning from the best

Amongst the multi-disciplinary programs at SIGGRAPH Asia 2009, attendees can look forward to three distinguished and internationally acclaimed featured speakers as part of the **keynote sessions** of the conference program, each an award-winner in his field.

- **David Kirk**, NVIDIA Fellow and former NVIDIA Chief Scientist, will be speaking on *The Power of the Heterogeneous Computing*, in which he will review the evolution of GPU technology, while sharing his vision for future generations of computer graphics systems. Kirk is the recipient of the California Institute of Technology's Distinguished Alumni Award in 2009, and was elected into the National Academy of Engineering in 2006.
- University of Tokyo Professor and Founding Director of the Interaction Laboratory within the Sony Computer Science Laboratories, **Jun Rekimoto**, will speak on *Enhanced Realities*. An inventor of various innovative interactive systems and sensing technologies such as NaviCam, a hand-held artificial-reality system, and SmartSkin, Rekimoto will explain how ubiquitous computing is rapidly making its way into everyday lives.
- **Joe Rhode**, Executive Designer and Senior Vice President of Walt Disney Imagineering, will cover *Story Structure and Design Narrative Environments*, in which he will explain the differences between storytelling in traditional linear forms and that applied to spatial environments. Among his achievements, Rhode is credited for leading the conceptualization, design and production of Disney's Animal Kingdom at the Walt Disney World Resort in Orlando since its inception in 1990.

In addition to these notable keynote speakers, a highlight of SIGGRAPH Asia 2009's Special Sessions program this year is a talk by digital media trailblazer **Scott Ross**, who for more than 30 years has led companies to over 15 Academy Award nominations, winning seven of them. An Executive Advisor to the Savannah College of Art and Design, Ross' topic will aptly cover *Making Your Mark on the Digital Movie Business: The Road to Success*.

An impressive line-up of robotics

As the robotics world continues to capture the imagination of interactive techniques enthusiasts, SIGGRAPH Asia this year saw a surge in the number of robotics works on display. From playing music, supporting children and performing daily tasks, some of the novel robotics showcased at SIGGRAPH Asia 2009 include:
- *SCHEMA*, a **multi-party interaction-oriented humanoid robot** that can help one learn Japanese, demonstrated through a quiz game setting where SCHEMA participates and activates group communication through the use of speech recognition and image processing of participants' faces, visual gaze and other nonverbal ques.
- *Shimon + Zoozbeat*, a robot musician that actually participates in **human-robot jamming**. Combining human creativity, emotion and aesthetic judgment with the algorithmic computational capabilities of computers, this project allows for compelling human-robot real-time interaction to create melodic, rhythmic and harmonic lines.
- *Petimo*, a novel **interactive approach that helps children make friends in safe social networks**. Petimo requires physical proximity before children can add friends to their social cyberworlds, enhancing relationships through real-life and online interactions. Designed specially for seven to nine-year-olds, Petimo features cutely designed interfaces, emoticons, gifts as well as interactive gestures.

A glimpse into how today's research could become tomorrow's daily routine

Providing a backdrop for stimulating discussions and further discoveries, SIGGRAPH Asia also offers an endless display of the possibilities in computer graphics and interactive techniques. The **Emerging Technologies** program, well-known for its display of revolutionary ideas that shape the future of graphic technologies, continues to offer thought-provoking installations and

interactive displays with a total of 68 submissions received, a 100 percent increase from SIGGRAPH Asia 2008.

Among the 27 pieces accepted and on display are:

- *FlexTorque*, which measures kinesthetic stimulations in a human hand to provide natural physical interaction such as arm wrestling.
- *Interaction Bar*, where scenes and the interaction surface react to users with unique visuals in each situation. This system may provide a conceptual model for future furniture that is more than just physical components in a room – furniture that can become a participant in a lifestyle.
- *MemoIcon* uses everyday objects as physical icons by binding virtual information to the objects, bridging the virtual and physical worlds.

Proving itself as the authoritative platform for the latest in digital innovations, SIGGRAPH Asia has also included a fascinating line-up of the latest in human-technology interface. One of the hottest new technologies at SIGGRAPH Asia 2009 is gestural interface, in which sensors determine human emotions or thoughts by capturing and analyzing facial expressions and eye movements. Some notable displays attendees can experience include:

- *Eye HDR: Gaze Adaptive System For Displaying High-Dynamic-Range Images*: Eye HDR may one day translate to **dynamic display systems that can naturally interact and adapt to the human view**.
- *SixthSense:* a prototype of **a wearable interface that captures commands through intuitive hand gestures**. SixthSense demonstrates the possibility of navigating a map displayed on a nearby surface with intuitive hand gestures or taking photos simply by looking at the scene you wish to frame.
- *Kaidan: Japanese Horror Experience in Interactive Mixed Reality*, features **a state-of-the-art 'haunted house' with virtual ghosts and visual mixed-reality experiences** attacking visitors in a dark, spooky Japanese room. Through a head-mounted display, earphones and a sword device, participants will be able to fight back attacks from the screaming ghosts they can see and hear.

A flavor of Asia

Animation and gaming enthusiasts are in for a treat at SIGGRAPH Asia this year. Leveraging its presence within the hotbed of computer gaming and animation, SIGGRAPH Asia 2009 will feature international favorites in these fields.

Hong Kong's Imagi Studios will offer a behind-the-scenes look at *Astro Boy* in various programs within SIGGRAPH Asia, while Square Enix from Japan will feature the cult favorite *Final Fantasy XIV*. SEGA Corporation will be conducting several interesting workshops, sharing its success stories and best practices with new entrants into the computer gaming industry. From acquiring basic knowledge of game development technologies, to more sophisticated high-level artificial intelligence techniques, fans of SEGA will get a chance to learn from the makers of well-known arcade titles, such as *The Key of Avalon* and *Let's Go Jungle.*

Thought-provoking experiments

Continuing SIGGRAPH's tradition of encouraging experimentation within the field, SIGGRAPH Asia's **Sketches & Posters** program features illustrated talks on computer graphics and interactive techniques in art, cinema, advertising, design, science, and engineering, as well as

graphic displays of incremental, preliminary, partial, and innovative insights that are important but not fully developed. This year's program includes:

- Pixar's Sonoko Konishi's *Fetching Expressions – Throwing realism into the Dogs 'UP'* where he examines how caricatured design, combined with an understanding of physiology, created comedic yet believable expressions for Gamma the English bulldog.
- A robust framework for tracking skeleton joints in real-time by using a single time-of-flight depth sensor from Omek Interactive's display *Markerless Motion Capture Using a Single-Depth Sensor.*

Pushing the boundaries of entertainment

A perfect platform where art, entertainment and technologies amalgamate, SIGGRAPH Asia offers visitors a rich tapestry of artistic installations, live performances and animation screenings, designed to inspire further excellence the field.

Visitors can look forward to an LED Kimono, a new light-and-sound instrument created with a single hand-made sleeve embroidered with 444 LEDs that respond to sound and movement. The LED Kimono is part of the **Art Gallery Live Performances**, which will also include *Website Impersonations*, which will interpret the source code of websites into dance movements on stage.

Over at the **Art Gallery**, more provocative pieces will be on display. The *Amidah* juxtaposes prayer positions in various stages of undress while *Dishes*, a digitally manipulated photo of a skyscraper bombarded with satellite dishes, invites its audiences to explore their views on the role of today's media storm on humankind; while in *Mishka,* the audience is confronted with restructured dolls that are both dainty and disturbing, aimed to simultaneously draw and repel audiences.

The Art Gallery Program received over 400 submissions this year, an increase of over 90 percent from that of 2008. Doubling its size from last year, more than 20 curated pieces and 19 juried pieces will be on display.

For lovers of animation and special effects, the **Electronic Theater** presents a feast in sight and sound, featuring the best pieces picked by a professional jury from across the globe. The *Best of Show* winner, *Anchored*, demonstrates how animators use computer graphics and typography in creative ways to push the boundaries of animation, while in *Deadline* Bang-Yao Liu creates a charming piece that was put together with computer pre-visualization.

Extending the animation treat, SIGGRAPH Asia 2009 also features award-winning works through the **Animation Theater**. Selected by an international panel of experts and representing the best works from 15 countries, this year's Animation Theater will include popular works, such as *Astro Boy, Final Fantasy XIV and Clone Wars,* alongside distinct pieces showcasing the production capabilities in Asia through *Cat Shit One, Peeping Life,* and *The Beauty.*

A total of 35 clips were selected for the Electronic Theater and a further 44 were selected to be screened at the Animation Theater.

Nurturing future talents

Known for introducing tomorrow's talents to employers within the industry, this year's Job Fair, presented by **CreativeHeads.net** and **Works Corporation Inc**., will showcase a host of positions

such as Artists, Animators, Programmers, Producers, Game Designers, Tech Directors and many more for top companies such as Double Negative, Lucasfilm and Square Enix.

Experts in the digital media field – from well-known companies such as Digital Domain, Pixar Animation Studios and Sony Pictures Imageworks as well as renowned universities such as Brown University, University of Tokyo and Zhejiang University – will be present at SIGGRAPH Asia 2009 to share their knowledge, experiences and latest discoveries in the world of computer graphics and interactive techniques. Among these are behind-the-scenes tricks and tips for animation production, advanced graphics modeling and application as well as best practices in digital production.

Highlights of the courses to be offered at SIGGRAPH Asia are:
- *The Look of 'Up': A Filmmaker's Guide to the Pixar Process* is a special workshop that will provide an insider's view on the challenges of creating a world's favorite animation feature.
- *Chiptune Marching Band*, a highly popular workshop and performance that invited participants to build their own customized sensor-driven sound-making circuit, before organizing themselves into a 'marching band' and presenting their instrument at the Emerging Technologies exhibition.
- *Sketching Interfaces for Computer Graphics* will explore this emerging alternative authoring method that allows casual users to create meaningful 3D models and animations quickly.

To promote the quality of education within the industry, the Educators Program offers sessions aimed at enhancing the delivery of skills and knowledge through sharing of research, methods and resources as well as views and opinions for teaching computer graphics and interactive techniques.

A global showcase for Asia

In its second edition, SIGGRAPH Asia continues to bring to Asia a global showcase of the latest in computer graphics and animation, while also offering Asia's best to the world.

"We are excited that Japan is hosting SIGGRAPH Asia 2009 this year. Japan's thriving digital media community as well as keen research work in the field of robotics and virtual reality has certainly given a boost to SIGGRAPH Asia this year, allowing us to offer a wider breadth and depth of content, in numerous fields within computer graphics and interactive techniques. I am confident that several of the ideas and displays showcased at SIGGRAPH Asia this year will translate into some of the hottest breakthroughs in the world of computer graphics and interactive techniques in the future," said Masa Inakage, Conference Chair, SIGGRAPH Asia 2009, and Dean and Professor, Graduate School of Media Design, Keio University.

For more information SIGGRAPH Asia 2009, please visit http://www.siggraph.org/asia2009/

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About SIGGRAPH Asia

The 2nd ACM SIGGRAPH Conference and Exhibition on Computer Graphics and Interactive Techniques in Asia will take place in Pacifico Yokohama, Japan. Featuring an international conference from 16-19 December 2009, SIGGRAPH Asia 2009 offers works that provoke thoughts, explore ideas in innovative ways, address contemporary issues, interactively engage viewers in discovery, and stimulate their intellect and creativity through art, computer animation, courses, education, technology, papers, sketches and posters.

SIGGRAPH Asia 2009 also features a trade exhibition of products and services from the computer graphics and interactive marketplace. Held from 17-19 December 2009, it is also a recruitment ground for job seekers to meet potential employers. Sponsored by ACM, SIGGRAPH Asia 2009 is expected to to bring together 8,000 computer graphics and interactive technology professionals and enthusiasts from Asia and beyond. For more information, please visit www.siggraph.org/asia2009.

About ACM

The Association for Computing Machinery (ACM) SIGGRAPH sponsors SIGGRAPH Asia 2008. ACM is an educational and scientific society uniting the world's computing

educators, researchers, and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.