Be Amazed by the Incredible Advancements of Interactive Technologies, Virtual and Augmented Reality at SIGGRAPH Asia 2013

Hong Kong, 30 September 2013 – This year sees the sixth annual SIGGRAPH Asia grace Hong Kong, promising to immerse attendees with the best in animation, human-computer interaction, new media art works and speculative ideas across the globe. From 19 to 22 November 2013, over 7,000 artists, designers, researchers, manufacturers and developers, as well as trade visitors from all over the world, will convene at the Hong Kong Convention and Exhibition Centre (HKCEC) to exchange spectacular ideas and excellent examples of computer graphics (CG) and interactivity that may help to shape the way we live our lives in the future.

Augmented and virtual reality - learn to look at the world in a different way
Leading this convergence of creativity will be two keynote speakers. At this year's SIGGRAPH Asia, Thad Starner and Philip Rosedale will be exploring the topics of augmented and virtual reality, both of which are rapidly advancing sectors in the industry.

Have you ever imagined a future where computers are so discreet that you can wear them anywhere on your body, performing specific functions to make your life easier? Where perhaps a glove teaches you new melodies on the piano or a wearable device can help you to interact with animals? SIGGRAPH Asia 2013 gives visitors the opportunity to come face-to-face with the first man to fully integrate a wearable computer into his everyday life, "augmented reality" pioneer and the Technical Lead of Google Glass, **Thad Starner**. As the first keynote speaker at SIGGRAPH Asia 2013, Starner will address the very real topic of "Wearable Computing: Through the Looking Glass", focusing on Google Glass and the future of wearable computers; what they are currently used for and ways that they will be applied in the future, including descriptions of some of the more surprising and unusual projects being explored by Starner and his group at Georgia Institute of Technology.

Virtual reality has been at the heart of the science-fiction genre since it first emerged and has retained its place as technology has advanced. As our relationship with technology becomes more symbiotic, the question of virtual reality and how it will manifest is increasingly pertinent in our physical world. SIGGRAPH Asia 2013's second keynote speaker, **Philip Rosedale**, has been providing answers to that question for years. He is the founder of the online virtual world Second Life and co-founder of High Fidelity, a company dedicated to creating a next-generation immersive 3D experience like nothing we have ever seen before. The subject of Rosedale's talk is "The Revenge of Virtual Reality", an in-depth look into the history and aspirations of virtual reality and how advances in technology, mobile devices and sensor technology have brought it closer to widespread use. Rosedale will illustrate his lecture with live demonstrations of unreleased technology and audience participation.

Developments that will change the way we interact with technology
Just as augmented and virtual reality have become more important and complex as the field has matured and we have advanced within it, so too have other interactive technologies. Developments in this sector are as groundbreaking as any other, transforming the way that we relate to the world around us through

an ever increasing depth and sophistication of interactivity and graphics.

This year, SIGGRAPH Asia invited submissions around this pertinent topic, looking for interactive technologies which could potentially benefit our future lives. Among the many submissions received, one that stood out was *Cuddly*, a smartphone application developed by Keio University that enchants and animates soft objects using the phone's camera and light to bring your soft objects to life.

SIGGRAPH Asia's Emerging Technologies' Director, Yoshifumi Kitamura from Tohoku University in Japan, said of this program, "Interactive technology has been one of the most important inseparable wheels of SIGGRAPH and SIGGRAPH Asia, and the Emerging Technologies program plays a vital role in driving the development of research communities all over the world to pursue technical innovations that will have a great impact on everyday life."

Symposium on Mobile Graphics and Interactive Applications

This year's Symposium on Mobile Graphics and Interactive Applications explores the opportunities and challenges of mobile applications that exist within the global graphics community, highlighting the novel uses of graphics and interactivity on mobile devices.

Among those selected for presentation is *Mobile Virtual Archery*, submitted by the University of Applied Sciences Düsseldorf. They have created a system that attaches a real archery bow to a mobile device, providing a realistic and believable archery experience that supports users when practicing the motions of traditional archery in a virtual environment.

At the other end of the spectrum is *Can You Copy Me?*, a touch-based tablet game that provides a conducive, engaging and effective platform to encourage emotional development in children, particularly children with autism. Created by the University of Technology in Sydney, the application shows children a range of facial expressions which they then have to copy and uses state-of-the-art facial expression tracking.

Learn the skills of sophisticated animation

For the first time ever, SIGGRAPH Asia will offer industry master classes conducted by leading professionals and pioneers in their field, allowing attendees from the industry to have a more hands on learning experience and develop new skills whilst at the conference.

Academy Award-winning animator, John Kahrs, will lead one of the industry master classes, giving participants the opportunity to learn about visual storytelling and the future of animation in today's technologically advanced climate. Best known for his Academy Award-winning animated short, *Paperman*, Kahrs has worked for two of the biggest animation studios in the world; Pixar and Walt Disney. Over the course of a day, he will be sharing his in-depth knowledge and passion, discussing how to create an emotional impact while using cutting-edge technology and dissecting the filmmaking decisions behind *Paperman* for any budding animator. In the second part, he will present a discussion of one of Walt Disney's animated classics, *Peter Pan*, looking at the way that it effortlessly combines animation, layout and story to create a rich and immersive film that is still as powerful today as it was when it was released 60 years ago. For the final session, Kahrs will interpret what it is to bring acting into contemporary animation and how to approach it from the inside out, emotionally and physically, to provide wholly formed characters for the 21st century.

Entitled "VFX in Creature Features – An MPC Master class", the second of these full-day training sessions

will be led by animator Paul Chung. Another leader of the field, Chung has over 30 years of creature animation experience, working on films such as the Academy Award-winning *Who Framed Roger Rabbit?* and *Shrek*, and has witnessed the industry transform from traditional 2D to computer-aided 3D animation. His master class will use elements of feature films from MPC to demonstrate and teach the working process of VFX work in creature features. Participants will be given the opportunity to examine and learn the different techniques that are applied when animating bipeds and quadrupeds and explore how VFX is used in creature animation.

In addition to these selected highlights, SIGGRAPH Asia 2013 provides a comprehensive Courses program, which sees experts and industry leaders present a wide variety of topics in CG and interactive techniques, with a special focus on user-interface design and interactive technologies. This program will also cover Asian arts and large-scale visualization, with all content tailored to professionals and students, offering them a glimpse of the future of CG and interactive technologies and giving them the opportunity to explore their potential uses and applications.

Insights from some of the world's leading academic research institutes
SIGGRAPH Asia 2013's Technical Papers program saw participation from many of the world's leading academic research institutes. This year, the highly-revered platform presents the latest technical research findings on CG and interactive techniques, focusing on both video applications and computational photography alongside a variety of topics, as seen in the submission from National Tsing Hua University and University College London, *Halftone QR Codes*. This paper proposes an approach to producing high-quality visual QR codes that are aesthetically pleasing and machine readable.

Another highlight in the Technical Papers program, *3-Sweep: Extracting Editable Objects from a Single Photo*, submitted by Tsing Hua University, The Interdisciplinary Center Herzliya and Tel Aviv University, introduces an interactive technique for manipulating simple 3D shapes by extracting them from a photograph. Using a combination of human, cognitive capabilities and the computational accuracy of a machine, users are able to quickly and easily create editable 3D elements.

SIGGRAPH Asia 2013's Conference Chair and Professor at the University of Hong Kong, Wenping Wang says, "For Hong Kong, as a pioneer in the Asian film industry as well as a leader in console and mobile games consumption, hosting SIGGRAPH Asia 2013 is akin to coming full circle, embracing not only the art of computer animation in Asia, but also the technology and innovation that goes on behind the scenes. Indeed, SIGGRAPH Asia 2013 in Hong Kong will serve as a bridge, connecting the Chinese computer animation industry with the best in the digital animation market globally, ultimately contributing to the dynamism of the local industry."

A gathering of top brands and creative talents
The SIGGRAPH Asia 2013 Exhibition invites participation from numerous industry frontrunners who will showcase their latest innovations allowing attendees to gain a holistic view of the exciting developments in hardware leaders **Christie Digital, Intel, NVIDIA, Stratasys, TechViz** and software giants **Autodesk, Chaos Group, Pixar Animation Studios** and **Side Effects Software.**

The exhibition floor will also play host to leading educational institutions, the **Academy of Art University** and **SCAD Hong Kong**, that will offer new curriculum possibilities and share alumni's success stories, as well as research institutions showcasing their latest research and ideas that may potentially push the industry forward.

Reflecting the ever expanding potential of the CG market in the region, world-renowned studios, including **Lucasfilm**, will be recruiting at the event.

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For detailed conference program updates, please visit the SIGGRAPH Asia 2013 website at
http://sa2013.siggraph.org

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About SIGGRAPH Asia 2013

The 6th ACM SIGGRAPH Conference and Exhibition on Computer Graphics and Interactive Techniques in Asia will take place in Hong Kong at the Hong Kong Convention and Exhibition Centre from 19 – 22 November 2013. This year, the line-up of conference programs will include an Art Gallery, the Computer Animation Festival, Courses, Emerging Technologies, Posters, a Symposium on Mobile Graphics and Interactive Applications, Technical Briefs and Technical Papers. There will also be a trade exhibition from 20 – 22 November 2013, offering participants, ranging from hardware and software vendors to studios and educational institutions, a platform to market their products and services to computer graphics and interactive techniques professionals and enthusiasts from Asia and beyond.

About ACM SIGGRAPH

The Association for Computing Machinery (ACM) SIGGRAPH sponsors SIGGRAPH Asia 2013. 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.

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