SIGGRAPH Asia 2015 in Japan presents the balance and harmony between disruptive innovation and new technologies

The most creative and eminent computer graphics and interactive techniques pioneers came together in Japan for the eighth edition of Asia’s biggest gathering of digital innovations, which focused on a combination of revolutionary and evolutionary ideas, concepts and technologies.

KOBE, Japan, 11 November 2015 – The Kobe Convention Center was bustling with activity last week as it played host to Asia’s premier graphics, animation, art and technology event. Held from 2 to 5 November 2015, the 8th ACM SIGGRAPH Asia Conference and Exhibition brought together over 7,000 computer graphics professionals, technologists, researchers, enthusiasts and trade visitors hailing from 49 countries across the globe.

SIGGRAPH Asia once again proved itself to be one of the leading platforms for computer graphics and interactive techniques, featuring distinguished pioneers including E. Wes Bethel, Lawrence Berkeley; Kwan Liu Ma, University of California, Davis; Scott Ross, VFX Pioneer and ex CEO/Founder of Digital Domain; Steven Feiner, Columbia University; Takeo Kanade, Carnegie Mellon University and Tomoyuki Nishita, The University of Tokyo.

More than 500 speakers delivered over 150 presentations, panel discussions and talks, generating robust discussions and deep insights on current and future developments in the fields of computer graphics and interactive techniques.

SIGGRAPH Asia 2015 also featured the latest hardware, software, technologies and inventions from around the world, attracting top names and organizations from both within and outside of Asia, including Amazon Web Services, Digital Hollywood Japan, Forum 8, Google, Intel Corporation, Isotropix, Khronos Group, Multi-plAtform Game Innovation Centre (MAGIC) - Nanyang Technological University Singapore, Pixar Animation Studios, Polygon Magic and Tokyo Designer Gakuin College, to name a few.

“The team at SIGGRAPH Asia, including our sponsors, supporters, presenters, contributors, exhibitors, reviewers, juries and volunteers came together to put up a fantastic show this year. I am confident that visitors enjoyed the rich number of affiliated programs we organized this year, along with more than 150 presentations that took place across all four days. SIGGRAPH Asia is truly the gathering for the most creative and distinguished computer graphics and interactive techniques professionals. It gives me great honor to be a part of this year’s edition in Japan,” said Yoshifumi Kitamura, Conference Chair, SIGGRAPH Asia 2015.

Highlights from SIGGRAPH Asia 2015 include:

Technical Papers Fast Forward gave attendees an entertaining and illuminating summary of this year’s submissions in an exciting two-hour session. Authors of the papers wowed the crowd with their concepts and results, enticing the audience to attend their complete paper presentations at the Technical Papers sessions. A paper, Real-Time Expression Transfer for Facial Reenactment, presented by representatives/students/researchers from Max Planck Institut für Informatik, Stanford University and the University of Erlangen-Nuremberg, showcased a method for the real-time transfer
of facial expressions from an actor in a source video to an actor in a target video, which enables the ad-hoc control of the facial expressions of the target actor.

The Computer Animation Festival continued to impress the audience with a showcase of stunning works spanning the disciplines of visual effects, animation, research and development, games and education. A series of panels and talks were organized in line with the Computer Animation Festival’s aim to bring in the most talented and elite computer graphics experts to go through the processes and techniques used to create the compelling content featured in blockbuster films from the past year as well as upcoming releases.

Audiences were treated to a behind-the-scenes look at animated features such as Big Hero 6, Inside Out and upcoming releases Sanjay’s Super Team and The Good Dinosaur. VFX Pioneer Scott Ross also presented a session on VFX… The History and Business of the Industry. The Electronic Theater featured a two-hour showcase of the best animations, visual effects and scientific visualizations produced over the last year. Some of the must-see works presented included scenes from fantasy adventure film The Hobbit: Battle of Five Armies, action role-playing game The Witcher 3: Wild Hunt, as well as CAF award winners Afternoon Class, Chase Me and Natural Attraction.

The keynote presentations were delivered on the opening and closing days of the conference. Ronnie del Carmen, co-director of the animated feature, Inside Out, from Pixar Animation, captivated the audience with his journey to Pixar and his learnings from developing the story of Inside Out. Sharing anecdotes from his life, including his inspirations, his previous work on renowned films such as Up, Finding Nemo and the animated TV series, Batman: The Animated Series, del Carmen highlighted the importance of storytelling in animation and collecting inspirations from everyday life events.

The second keynote speaker, Satoshi Tadokoro, research professor at Tohoku University and project manager at the Japan Cabinet Office ImPACT Project, shared with the audience his experiences in the use of robotics systems for disaster response and recovery, and showcased some of his work with state-of-the-art disaster robotics and its applications. Some of the examples he touched upon included the robot “Quince”, known for its aid in restarting a cooling system in the The Fukushima Daiichi Nuclear Power Plant, and “Kenaf”, which is able to map out areas that may be inaccessible to humans and also point out obstacles in such areas. In his Keynote, Doctor Tadokoro emphasized the challenges faced by researchers and scientists in successful implementation of disaster robotics in mainstream scenarios, and he also shared the field’s goals including reduction of global disaster morality by 2030.

The Emerging Technologies and Art Gallery programs introduced visitors to intriguing installations aimed at showcasing the lighter side of technology applications and human-computer interaction.

Emerging Technologies showcased the latest interactive and graphics technologies in the 3D, virtual reality and projection mapping industries. This year’s Emerging Technologies Program was a true
cross-section of science, technology, and art. Audiences were fascinated by 30 hands-on demonstrations that expand the limits of current display technologies, exciting new hardware that enable sophisticated and nuanced user input, innovative interaction techniques that enable more complex interaction with application data and functionality, as well as excellent examples of haptics developed to support multi-/cross-modality scenarios.

The program also announced the top two demonstrations based on audience and committee vote – the Best Demo Award as voted by Audience went to Ketsuro-Graffiti: A Canvas With Computer Generated Water Condensation by Yuki Tsujimoto, Yuichi Itoh and Takao Onoye from the Graduate School Of Information Science And Technology, Osaka University, while the Best Demo Award as voted by Committee went to FVisiOn: Interactive Glasses-Free Tabletop 3D Images Floated By Conical Screen And Modular Projector Arrays by Shunsuke Yoshida from the National Institute of Information and Communications Technology (NICT), Japan.

Ketsuro-Graffiti is a novel canvas that shows images with computer generated water condensation and enables users to touch them freely. Users can write or apply graffiti with their fingers on a pattern of water generated condensation. The proposed system basically consists of peltier devices, an array of heat conductive actuators, and a display surface.

The “FVisiOn” project provides virtual 3D media naturally alongside real media without the need for special glasses. Its design concept floats full-color 3D images of a 360°-view onto an empty, floating tabletop surface. Many people can naturally share the experience and enjoy the dancing 5-cm-tall 3D characters on the table.

18 amazing curated pieces of art that integrated craft techniques and contemporary digital design were highlighted in the Art Gallery. Themed Life on Earth?, the program this year invited visitors to experience and interact with art works and installations that utilize digital technology including visual and sound works, augmented-reality installations, as well as performances. Notable installations (from left to right) included At Home With Others, Conglomerate Distortions, S>HE<R and To Afar The Water Flows.
The **Exhibition** floor offered conference attendees a glimpse of innovative future tech that could soon see uses in the commercial and consumer space. Visitors were blown away by the wide range of newly-developed systems, as well as novel applications of existing technology. Exhibitors this year included *Live2D*, a program that allows artists to easily capture and import 2D illustrations into 3D animations as well as an area for the Kobe City Government’s very own displays, where visitors were treated to talks about the development of Kobe as a leader in the field of IT.

The **Symposium on Education** hosted various sessions, including education research, panel talks and hands-on workshops. Artists from Pixar Animation Studios' Inside Out hosted a Student Focus Session, *Pixar's Abstract Thought – educational journeys from Inside Out artists*, wherein they shared with audiences, a bulk of whom were students, their educational backgrounds and journey to Pixar. The future challenges of human resource development efforts in the digital content field within Asia was a key discussion point in the panel session, *Tomorrow’s digital content leaders in Asia*, which was moderated by Shuzo John Shiota, CEO, Polygon Pictures and Computer Animation Festival Chair, along with Miho Aoki, the Symposium of Education Chair.

Showcasing some of the leading research and development in mobile gaming, graphics, interaction techniques and Augmented Reality, the **Symposium on Mobile Graphics and Interactive Applications** offered visitors the opportunity to a first-hand look at some of the exciting developments in mobile technology. Audiences were thrilled by *JoggAR*, a novel framework to manage wearable visual, audio and sensing technology that enables a game-like persistent Augmented Reality (AR) environment suitable for enhancing jogging and other exertion-based experiences.

At a special talk presented at the **Symposium on Visualization in High Performance Computing** program, Dr. Hirofumi Seo, CEO & President, Sciement, Inc., shared with attendees the intricacies of data-specific visualization, using insights from his project, the *UT-Heart*. The Symposium also organized a contest inviting participants to showcase live demonstrations of open data visualization. The Best Demo was awarded to Kiri Nakata and Tsuyoshi Tatsukawa, who showcased a visualization of cell divisions of embryos as a binary tree that could also serve to detect similar processes from two different sets of data.
The ninth annual conference, SIGGRAPH Asia 2016, will be held in Macao at The Venetian Macao from 5 to 8 December 2016.

Looking forward to next year’s edition of SIGGRAPH Asia, Hongbo Fu, Conference Chair for SIGGRAPH Asia 2016, had the following to say: “SIGGRAPH is definitely the most prestigious forum in the field of computer graphics. Since the first introduction of SIGGRAPH into Asia in 2008, SIGGRAPH Asia has continued the great success of SIGGRAPH in North America, and has quickly become another platform for publishing top-notch graphics research. It not only exposes local people or industries in Asia to many cutting-edge technologies, but it also provides a more direct platform for Asian graphics researchers to exchange new ideas with international researchers.

At SIGGRAPH Asia 2016, we will have Computer Animation Festival, Courses, Emerging Technologies, Posters, and Technical Papers. All of them have been successfully inherited from SIGGRAPH North America. After several years’ of development, SIGGRAPH Asia has also developed its own outstanding and reputable programs. We are pleased to continue offering Technical Briefs, Symposium on Education, Symposium on Mobile Graphics and Interactive Applications, Symposium on Visualization and Workshops at SIGGRAPH Asia 2016. The theme of SIGGRAPH Asia 2016 is “Key to the Future”, since we strongly believe it is always important to keep rethinking the future of computer graphics by exploring new directions.”

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About SIGGRAPH Asia 2015
The 8th ACM SIGGRAPH Conference and Exhibition on Computer Graphics and Interactive Techniques in Asia took place in Kobe, Japan at the Kobe Convention Center from 2 – 5 November 2015. The annual event held in Asia attracted the most respected technical and creative people from all over the world who are excited by research, science, art, animation, gaming, interactivity, education and emerging technologies.

The 4-day SIGGRAPH Asia 2015 conference included a diverse range of juried programs this year, including an Art Gallery, Computer Animation Festival, Courses, Emerging Technologies, Posters, Technical Briefs, Technical Papers, Symposium on Mobile Graphics and Interactive Applications, Workshops, and two new Symposiums – Symposium on Education and Symposium on Visualization.
in High Performance Computing. In addition, the 3-day exhibition held from 3 – 5 November 2015 offered a business platform for industry players to market their innovative products and services to the computer graphics and interactive techniques professionals and enthusiasts from Asia and beyond.

**About ACM SIGGRAPH**

The Association of Computing Machinery’s Special Interest Group on Computer Graphics and Interactive Techniques (ACM SIGGRAPH) sponsors SIGGRAPH Asia. Founded in 1947, 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. The ACM SIGGRAPH deals with all aspects of graphical user/computer communication and manipulation: hardware, languages, data structure, methodology, and applications.