Media Release

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Institute for Infocomm Research (I^2R), Singapore's Largest ICT Research Institute, Collaborates with Globally Competitive Companies and Invents Impactful Technologies Anchored by Scientific Research

I^2R showcases innovations that can power ICT companies locally and globally

Singapore – 8 May 2013 – The Institute for Infocomm Research (I^2R), a research institute of the Agency for Science, Technology and Research (A*STAR) announced two collaborations with ST Electronics (Info-Comm Systems) and Singapore Power in the areas of Software Defined Communications systems and Grid Networks respectively. The collaborations are in line with I^2R's directions to develop a wide spectrum of capabilities in the Intelligence, Communications and Multi-media (ICM) sectors of the industry.

2. The partnerships were announced at I^2R's ICM Outreach 2013 event held at Raffles City Convention Centre (Fairmont Hotel) today. At the event, I^2R also showcased technologies developed in its laboratories that are ready to be adopted by companies. The research institute showcased its Sense and Sense-abilities programme, a part of urban solution system that provides real-time information from a wide range of sensors for government agencies to make better and informed decisions provide a safe and clean environment for city dwellers to live in. In particular, the Institute showcased the Snap2Tell mobile application, an image recognition technology that allowed users to obtain extensive information and understand its surrounding environment simply by snapping a photo. They also showcased their "Hush-Hush" mobile security application that enabled users to send confidential contents to each other via Near Field Communication (NFC) technology through Secure SMS (short message service) and Secure MMS (multi-media messaging service).

Please refer to Annex A for more details of the mobile applications that were showcased at the event.

Supporting Globally Competitive Companies (GCC)

3. ST Electronics (Info-Comm Systems) and Singapore Power will set up joint laboratories with I^2R's in Fusionopolis to deepen the technological capabilities, and to drive innovation and advance technology in their respective fields. The I^2R-STEE Info-Comm joint laboratory will develop advanced Software Defined Communication systems as well as train ST engineers in conceptualisation and design. . This will equip ST Electronics to compete internationally as well as locally with in–house designed advanced communication products for different customised applications. The I^2R-Singapore Power joint laboratory will develop capabilities and solutions to enhance the reliability of Singapore's grid networks.

Enabling businesses with innovative technologies

4. I^2R researchers were also honoured for their win at 2012 GE Flight Quest by Chairman of A*STAR, Mr Lim Chuan Poh and Mr. Brian Selby, Vice President of Global Business Development, GE Idea Works through an award ceremony held at the ICM Outreach event. More than 175 teams formed from the world's best data scientists took part in this international competition which aimed to help GE make flights more efficient and punctual. The Singapore-based team successfully beat flight time predictions from expert air traffic controllers by 40 percent. Commercial airlines can potentially use the algorithm developed by the team to predict gate and runway arrivals of their flights more accurately, saving fuel and time. (For more info, please see www.gequest.com/c/flight)

I^2R's spin-off company takes off

5. In line with Singapore's demand for technopreneurship, I^2R has spun off start-up companies founded on cutting-edge technologies. An example of a successful I^2R spin-off company is iTwin, which specialises in simple network privacy and security solutions.

6. The founders of the company are ex-I^2R researchers who have used their expertise in bringing the start-up company to new frontiers. The company has been winning awards since it first started in 2009.They have won the Popular Mechanics

CES 2013 Editor's Choice Award this year. In 2012, the company was awarded the "Most Innovative Infocomm Product" in the National Infocomm Awards 2012.

Bringing impact to Singapore's infocomm industry

7. As a globally competitive source of infocomm innovations, I^2R's technologies made a difference to corporate organisations looking for an edge in the global marketplace as well as local businesses looking to tap into our exciting new technologies to expand beyond their home markets.

8. "We are pleased to work with I^2R in developing capabilities and solutions to enhance the reliability of our power grid networks. This exciting collaboration will bring us to new frontiers in smart grid technology to enable energy efficiency and sustainable solutions for our customers." said Mr. Chuah Kee Heng, Head, Strategic Development of Singapore Power.

9. "I^2R has been our partner in the development of Communications and Info-Security technologies for many years. The I^2R team has been working closely with our engineers as a cohesive team to develop solutions for end-users. .Collaborating with a research leader such as I^2R to develop Software Defined Communication systems is a natural choice." said Mr. Lee Fook Sun, President of ST Electronics.

10."I^2R is happy to form partnerships with ST Electronics (Info-comm Systems) and Singapore Power. Our joint collaborations will result in the development of advanced application technologies in the ICM sector for Singapore companies to gain a competitive edge in a challenging market. We also congratulate our Data Analytics team for winning the prestigious GE Flight Quest and bringing the reputation of Singapore-based research efforts to greater heights." said Dr. Tan Geok Leng, Executive Director of I^2R.

11. Following the event, I^2R is organising an ICM Outreach Show and Tell on 16 May 2013. A wide variety of ICM capabilities developed to address Singapore's large and complex infocomm and media ecosystem will be showcased at the Show and Tell.

Industry players who are interested to learn more about I^{2}R's multi-disciplinary innovations and the potential applications in their businesses are invited to register their interest on http://bit.ly/10cnaPU.

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About Institute for Infocomm Research (I^{2}R)

The Institute for Infocomm Research (I²R pronounced as i-squared-r) is a member of the Agency for Science, Technology and Research (A*STAR) family. Established in 2002, our vision is to power a vibrant and strong infocomm ecosystem in Singapore. We seek to foster world-class infocomm and media research and develop a deep talent pool of infocomm professionals to power a vibrant knowledge-based Singapore. At I^{2}R, intelligence, communications and media form our 3 strategic thrusts. Our research capabilities are in information technology, wireless and optical communication networks, interactive and digital media, signal processing and computing. For more information about I^{2}R, please visit www.i2r.a-star.edu.sg.

About the Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is the lead agency for fostering world-class scientific research and talent for a vibrant knowledge-based and innovation-driven Singapore. A*STAR oversees 14 biomedical sciences and physical sciences and engineering research institutes, and six consortia & centres, located in Biopolis and Fusionopolis as well as their immediate vicinity. A*STAR supports Singapore's key economic clusters by providing intellectual, human and industrial capital to its partners in industry. It also supports extramural research in the universities, and with other local and international partners. For more information about A*STAR, please visit www.a-star.edu.sg.

Annex A

Ready-To-Commercialise apps from the Labs of I^2R

i) Hush-Hush – *Confidential and secured communication*

'Hush-Hush' is an easy-to-use mobile app that enables two or more people to have private & secured communication amongst themselves. The app transparently & securely handles the complete password lifecycle - generation, transmission, storage and deletion. By using NFC, the app also eliminates the need for an (un)trusted 3rd parties as intermediaries. The mission of 'Hush-Hush' is to enable the general smartphone users, specifically people from non-IT background, to adopt a secure communication lifestyle. 'Hush-Hush' supports Secure SMS and Secure MMS and there are plans to enable Secure Email and Secure File Transfer in the near future.

ii) Snap2Tell – *Image Recognition*

The Snap2Tell image recognition technology recognises an object or scene simply by pointing a mobile phone or tablet camera to it, or snapping a picture from it. The relevant information will then be retrieved and shown to the user. This augmented reality technology enables the user to obtain extensive information and understand its surrounding environment in an interactive way. The computation of the image recognition can be done on a mobile phone, a local computer, or a remote computer server connecting to Internet.

How to apply Snap2Tell in businesses:

- Real-time 3D object rendering on top of physical object
- Real-time video overlay on top of physical scene
- Recognize products or logos to bring up videos for commercial advertisement or user guide
- Recognize advertising picture on newspaper and magazine to bring up various live multimedia contents on one screen