

MEDIA RELEASE | FOR IMMEDIATE RELEASE

Singapore, 29 September 2009

Total: 9 pages (including Appendices)

NATIONAL RFID CENTRE CREATES DIVERSE RFID ECO-SYSTEM IN SINGAPORE

- *Institute of Technical Education partners NRC to set up ITE-NRC RFID Technology Centre to catalyse RFID technology adoption in the service industry*
- *NRC awards grants for 2 new RFID applications in the healthcare and construction industries*

Singapore, 29 September 2009 – The National RFID Centre (NRC) announced today that it will accelerate the adoption of RFID technology in the hospitality, healthcare and construction industries, an effort it has championed since 2006. The NRC will sign a Memorandum of Understanding (MOU) with the Institute of Technical Education (ITE) to catalyse RFID technology adoption in the service industry through the academic curriculum in ITE. The NRC will also award two RFID Innovation Platform grants to Tan Tock Seng Hospital and Transvert Scaffold and Engineering at the NRC RFID User Conference and Technology Exhibition held on the same day, one of which is a first for the construction industry.

Memorandum of Understanding between ITE and NRC

The MOU signed with ITE provides NRC the opportunity to assist in the set up of the ITE-NRC RFID Technology Centre at the new ITE College West at Choa Chu Kang. This new centre will seed RFID adoption in the mindset of students and will also enhance the training of some 850 students who have enrolled in the *Nitec* and *Higher Nitec* courses in Info-Communications Technology and Electronics Engineering. ITE students and staff will be provided with free access to NRC's training materials on RFID applications and have opportunities to undergo Industrial Attachment in companies.

RFID Innovation Platform Grant: Two New Winners

NRC awarded 2 new RFID Innovation Platform grants that will enhance patient safety and ensure construction worksite safety. The first is that won by **Tan Tock Seng Hospital on the use of RFID technology to enhance patient safety**. The project will develop a very useful and practical tool to trace all stages of the sterilisation process from the point of usage to decontamination of a surgical instrument set to ensure patient safety, a priority in the hospital. The tool can withstand high temperature of 134-degree Centigrade, which is the operating temperature for 10,000 autoclaving cycles of 4 minutes each for a minimum of 10 years. This will be especially crucial in the event of an infection outbreak or faulty sterilisation process where prompt recall of equipment is required. With each instrument set embedded with an RFID tag, it is possible to track the movements of the instrument set by associating with the individual patient and staff that had come into contact with the set. This reduces the chain of transmission of hospital-acquired infections and halts the spread of infection. Patient safety is further assured through the tracking of the usage of surgical instruments whose lifespan can now be accurately determined and can be replaced promptly according to manufacturers' specification.

The second grant was clinched by **Transvert Scaffold and Engineering for the use RFID technology to ensure worksite safety in the construction industry, particularly when scaffolding structures are used**. A unique feature of this collaboration is the use of battery-assisted passive (BAP) RFID technology to give supervisors and inspectors a better read range in the harsh environment. This is the first BAP RFID project on a full-scale basis in Singapore for the construction industry. By implementing this project, safer scaffold structures are expected to be built more efficiently, reducing accidents at worksites. The cost savings due to the efficient use of scaffolding manpower can also be passed on to the main contractors. It is anticipated that by instilling site supervisors with more confidence to handle RFID technologies, more RFID solutions can be deployed in the future by greater number of companies in the construction industry, thereby multiplying RFID adoption within and between industries.

Mr Boon Swan Foo, Executive Chairman of Exploit Technologies and Chairman of NRC Steering Committee, said, "Initiated as a multi-government agency effort to help local enterprises to tap

RFID to improve business and deliver value to their customers, NRC has created a vibrant RFID eco-system in Singapore, seeding diverse RFID adoption across multiple industry sectors to impact positively on company performance and industry standards. Today's MOU with ITE College West is another manifestation of NRC's effort to build up RFID capability in Singapore.

"Since the launch of the Ministry of Trade and Industry S\$4.5m RFID Innovation platform in 2008 to co-fund 30 RFID pilot projects, some 21 applications for RFID projects were received and 13 were awarded to local SMEs, public hospitals, and government agencies. I am encouraged by the response. Congratulations to Tan Tock Seng Hospital and Transvert Scaffold and Engineering for winning the Award this time round. We look forward to more of such proposals that promote innovative use of RFID in Singapore."

"ITE sees this collaboration as an excellent opportunity for the transfer of technology to ITE staff and students through learning, sharing and exchange of RFID knowledge. This MOU will pave the way for a closer and stronger working relationship between the staff of ITE and NRC as well as its industrial partners in RFID technologies," elaborates Dr Yek Tiew Ming, Principal, ITE College West.

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About Agency for Science, Technology and Research (www.a-star.edu.sg)

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 Singapore. A*STAR actively nurtures public sector research and development in Biomedical Sciences, and Physical Sciences and Engineering, and supports Singapore's key economic clusters by providing intellectual, human and industrial capital to our partners in industry and the healthcare sector. It oversees 23 research institutes, consortia and centres located in Biopolis and Fusionopolis, and the area in their vicinity, and supports extramural research in the universities, hospitals, research centres, and with other local and international partners

About National RFID Centre (www.exploit-rfid.com)

The National RFID Centre is a multi-government agency effort by A*STAR, the Economic Development Board (EDB), Infocomm Development Authority (IDA) and SPRING Singapore. Endorsed by the Ministry of Trade and Industry, the National RFID Centre serves as the focal point for Radio Frequency Identification (RFID) in Singapore.

The primary objective of the Centre is to drive the development and adoption of RFID technology to help Singapore industries achieve economic benefits and growth. The Centre focuses on key industry verticals strategic to Singapore including Manufacturing, Logistics, Biomedical, Retail and Hospitality industry, and link up the RFID community including product vendors, technology providers, research and academic organisations, government ministries and potential end users to exploit the full potential of RFID.

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About Exploit Technologies Pte Ltd (www.exploit-tech.com)

Exploit Technologies is the strategic marketing and commercialisation arm of the Agency for Science, Technology and Research (A*STAR). Its mission is to support A*STAR in transforming the economy through commercialising R&D. Exploit Technologies enhances the research output of A*STAR scientists by translating their inventions into marketable products or processes. Through licensing deals and spinoffs with industry partners, Exploit Technologies is a key driver of technology transfer in Singapore. It actively engages industry leaders and players to commercialise A*STAR's technologies and capabilities, bridging the gap from Mind to Market. Exploit Technologies' charter is to identify, protect and exploit promising intellectual property (IP) created by A*STAR's research institutes.

For more information, please visit www.exploit-tech.com.

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About Institute of Technical Education

The Institute of Technical Education (ITE), Singapore, was established as a post-secondary education institution in 1992 under the Ministry of Education. ITE is a principal provider of career and technical education and key developer of national occupational skills certification and standards to enhance Singapore's workforce competitiveness. Under its "One ITE System, Three Colleges" Model of Education and Governance, ITE has three Colleges, comprising ITE College Central, ITE College East and ITE College West.

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ANNEX B MOU BETWEEN NRC AND ITE

Partnership with leading industry players is one of the strategies adopted by ITE to keep pace with rapid changes in the global economy and technology landscape. The partnership with NRC is an excellent example of such strong collaborations with the industry. Under the scope of collaboration, NRC will assist ITE to set up a RFID Competency area within the Centre of Technology at the new ITE College West at Choa Chu Kang. At the Centre, both parties can showcase the new RFID technologies and projects.

Under the "One ITE System, Three Colleges" Education and Governance Model, ITE College West envisages to be "An ITE College of Excellence for Service Quality". ITE's partnership with NRC in the setting up of the RFID Competency Centre, will act as a catalyst for the adoption of RFID in the service industry sector. In addition, ITE staff and students will be provided with free access to NRC's training materials on RFID applications, and will have opportunities to undergo Industry Attachment in companies that have obtained NRC grants for developing RFID application in niche areas. There are also possibilities for ITE staff to develop joint projects and training programmes with these companies.

ITE sees this as an excellent opportunity for the transfer of technology to ITE staff and students through learning, sharing and exchange of RFID knowledge. The MOU will pave the way for a closer and stronger working relationship between the staff of ITE and NRC, as well as its industrial partners in RFID Technologies. With a strong rapport in place, ITE and NRC can further explore other avenues to create opportunities for the staff and students.

FACTSHEET ON RFID COLLABORATION WITH TAN TOCK SENG HOSPITAL TO ENHANCE PATIENT SAFETY

The RFID application is to enhance the visibility and traceability of the surgical sets at the operating theatre and the Central Sterile Supply Department/Theatre Sterile Supply Unit (CCSD/TSSU) of Tan Tock Seng Hospital.

In the event of unknown infection outbreak, the system's contact tracing ability can help to contain and confine the spread of infection through timely process of tracing and recalling of affected surgical sets.

RFID technology is used to integrate with the CCSD/TSSU operations and improve the efficiency of the work processes.

FACTSHEET ON COLLABORATION WITH TRANSVERT SCAFFOLD AND ENGINEERING FOR SAFER SCAFFOLD STRUCTURES IN THE CONSTRUCTION INDUSTRY

The RFID technology is applied to address problems of scaffold structures safety and operational management for Transvert. Another application is in worker attendance reporting, an area that is very administratively heavy but with very little contribution to work productivity. The specific application areas are in material receipt, management overview reports, inspection of scaffold structures as well as attendance taking.

RFID is used to tag:

- each bundle of scaffold materials to track quantity of each type of materials received at each site, quantity of materials used and unused; quantity collected at end of dismantling etc to provide management a better overview of the types and quantities of materials used for each job to better gauge costing for future similar projects
- every completed scaffold structure with an RFID-enabled safety signage that captures critical data such as customer name, job ID, date of last and next inspection
- tag every worker to make attendance-taking more effective and less erroneous.

ANNEX D ABOUT RFID INNOVATION PLATFORM FUND

The multi-agency S\$4.5 million RFID Innovation Platform Fund was launched in February 2008 to support RFID pilot projects in public and private sectors on a co-funding basis. The RFID Innovation Platform aims to stimulate robust engines of growth in the industries through the use of RFID technologies. The Platform also strives towards uplifting the major sectors including retail, tourism, healthcare and logistics, and further strengthening our position as world leaders in these sectors, by enhancing service delivery with greater cost efficiency.

Apart from boosting innovations in both the public and private sectors, the RFID Innovation Platform is positioned to expand the RFID industry cluster by growing existing and spawning new home-grown RFID companies, as well as attracting Multi-National Corporations to base in Singapore. In addition, the Platform seeks to catalyse further research and development in advanced RFID technologies through collaboration between industry and Singapore research institutes and universities.

The RFID Innovation Platform managed by A*STAR, aims to support RFID pilot projects in public and private sectors in Singapore on a co-funding basis. There are two Calls for Proposal (CFP) per year from 2008 to 2012. To-date, 13 projects were awarded.

PROJECTS	INNOVATION
KK Women's and Children's Hospital: Bed Tracer System	A RFID tracking system to improve operational efficiency and reducing the time spent searching for the right-sized pediatric beds, leading to better patient care.
SIA Engineering Company: Component Tracking System	A RFID tracking system involving tagging of aircraft parts and components and monitoring of repair job status and performance, leading to better throughput and supply chain management.
Laundry Network: RFID Smart Conveyor	A RFID tracking system integrated into a conveyor to increase efficiency and improve traceability of uniforms, leading to enhanced customer service at laundry collection.
National University Hospital: RFID Surgical Gauze	A RFID tracking system involving tagging of surgical gauzes and tracking its usage in the operating theatre, leading to enhancement in patient safety and improvement in work safety.
SMRT Corporation: RFID Warehouse Management	A RFID based inventory warehouse system to improve productivity and shelf life tracking in inventory management,

PROJECTS	INNOVATION
System	leading to higher service standard in public transportation.
TC AutoClinic: Car Inventory Management and Process Optimization System	A RFID tracking system to improve operational efficiency and energy conservation with automated storage platforms, leading to higher customer service standard and reduction in operating cost.
Kim Hiap Lee Co: Pallet Leasing & Tracking with EPCIS & Gen 2 RFID Standard	A pallet leasing and tracking system based on EPCIS and Gen 2 RFID standards to provide supply chain tracking service, reduce error in counting of returned pallets, leading to higher customer service standard.
National Cancer Centre Singapore: RFID-enhanced Ambulatory Treatment Unit Management	A RFID tracking system to improve care coordination for cancer patients and increase resource utilization, leading to higher patient care standard.
Honsen Printing Industries: Inventory Management with RFID Smart Shelves	A RFID smartshelf system to reduce processing error, improve efficiency and reduce raw material wastage, leading to bottomline growth and greater customer satisfaction.
SF Consulting: RFID-based File Management System	A RFID-based file management system to improve the efficiency of filing and retrieval processes, leading to productivity gain and higher information security standard.
OM Group Ultra Pure Chemicals: RFID-based Dip Tube Warehouse Management System	A RFID warehouse management system involving tagging of dip tubes to improve storage utilization and inventory record accuracy, increase productivity, leading to higher customer service standard.
Tan Tock Seng Hospital: End to End Track and Trace of Medical Surgical Sets	A RFID tracking system involving tagging of surgical sets and tracking them from Central Sterile to Point of Use for Innovating Infectious Disease Management and Enhancing Patient Safety.
Transvert Scaffold & Engineering: RFID for Enhancing Scaffold Management & Safety	A RFID tracking system involving tagging of scaffold structure with RFID-affixed safety signage for enhancing safety inspection procedure and tagging bundle of scaffold materials for effective on-site inventory management, tagging of worker for efficient attendance taking.