

**NATIONAL INFOCOMM AWARDS 2014**

**Winner for the Category of Most Innovative Infocomm Product/Solution**

---

**Company:** NUMONI Pte Ltd

**Product/Solution:** NUGEN – Micro-transaction Self-Service Terminal for the Underbanked

**Product/Solution Description**

The NUGEN is a Cash-based Self-Service Terminal created, developed and manufactured by NUMONI Pte Ltd to serve people who are underserved by Banks. The NUGEN brings cash-into-account for such people who comprise more than 80% of the world's population. People can top-up prepaid airtime to their mobile phones, pay bills, purchase tickets, issues vouchers, repay micro-loans, conduct micro-savings, make small remittances or value transfers, and top up to their mobile wallet with the NUGEN machine. In 3 simple steps, the transaction is completed. The NUGEN is designed to help bring the digital economy to the masses.

The NUGEN supports dealers and retailers with its clean interface and each of maintenance. Instead of having multiple counters or support systems for these micro-transactions, the dealers/retailers need only use one Terminal to manage the transactions and cash-payments. Monitored and online 24/7, the NUGEN is simple to use and install, and is demanded in developing economies.

**Benefits**

The NUGEN pulls many types of micro-transactions into one backend to be presented to the Customer on one intuitive interface. The machine is designed to reach out to the masses, and is therefore sturdy, safe and ready to be installed by any dealer/retailer easily. The NUGEN accepts 23 currencies around the world. Where the mobile wallet is seen to be the way forward to bring financial services to 80% of the world that remains underserved by Banks, the NUGEN automates top-ups to the wallets thereby giving ease and convenience to both dealers/retailers. Each transaction is tracked with an audit trail with KYC and AML features. In Singapore, the NUGEN allows foreign workers to make simple transactions, enabling them with an easy and secure prepaid mobile airtime top-up solution.

**About Numoni Pte Ltd**

Founded in Jan 2012, Numoni is a Singapore-based payments company with the vision to serve emerging markets and the 300-million people migrant community around the world. The focus of Numoni is to bring cash-to-account, that is, Numoni's machines handle cash payments and convert such payments into digital form, thereby helping to bring the global digital economy to emerging markets.

Numoni's investors include Norma Sit (Singaporean, Founder and CEO), Insas Berhad (KLSE: INSAS), Mr Bobby Lim Chye Huat, SPRING SEEDS Capital Pte Ltd, Enspire Capital Pte Ltd and former investment bankers.

Numoni recently completed its investment into a Thrift Bank in the Philippines and has ventured beyond Singapore to Indonesia, Malaysia, Cambodia, Hongkong and Sri Lanka.

**For more information, please contact:**

Ms Betty Lee

Senior Marketing Manager

10 Ubi Crescent Ubi Techpark #02-19 (Lobby B) Singapore 408564

Tel: +65 67499661 Fax: 67499662

Email: [bettylee@numoni.com](mailto:bettylee@numoni.com)

## **NATIONAL INFOCOMM AWARDS 2014**

### **Winner for the Category of Most Innovative Use of Infocomm Technology (Public Sector)**

---

**Organisation:** Land Transport Authority

**Product/Solution:** Advanced Data Analytics for the Bus Service  
Enhancement Programme

#### **Product/Solution Description**

In Singapore, the daily ridership on public transport is 6.6 million journeys, of which bus account for 3.7 million rides today. This is a significant increase from 3.5 million daily bus rides in 2012, with an expected increase of 100,000 rides every year. To relieve crowding on buses, LTA leverage on advanced data analytics to data-mine farecard data for gaining deep insights on travelling patterns and demands of commuters. This allows LTA planners to assess and inject new bus routes and additional buses to improve bus frequencies. These measures under Bus Service Enhancement Programme (BSEP) have allowed commuters to enjoy better level of bus services.

#### **Benefits**

The use of advanced data analytics allows LTA to swiftly map out commuter travel patterns and behavior across Singapore. This has accelerated on-site verification of hotspots with persistent heavy passenger volume during peak hours. With this insight, LTA was able to perform targeted injection of bus capacity, which saw a 60% reduction in the number of bus services with persistent crowding in spite of year-on-year increase in average daily bus ridership. Average waiting time on popular services has also shortened by about 3 to 7 minutes. In the latest Public Transport Customer Satisfaction Survey carried out in 2013, customer satisfaction for bus services rose by two percentage points to 88.3%. 9 in 10 commuters surveyed have expressed satisfaction with Singapore's bus services. Satisfaction with waiting time has also improved from 54.2% to 61.5%. Other service attributes like comfort, travel time and reliability saw improvements as well. These improvements were largely attributed to the successful BSEP rollout that has reversed the downward trend in satisfaction with bus services since 2010.

#### **About Land Transport Authority**

The Land Transport Authority of Singapore (LTA) was set up under the Ministry of Transport to spearhead land transport developments in Singapore. The primary role of LTA includes:

- Planning, designing, construction, management and maintenance of the transit systems, roads and related facilities;

- Acting as agent of the Singapore Government in the administration, assessment, collection and enforcement of various taxes, fees and charges and other services relating to land transportation;
- Regulating both private and public transport, and manages Singapore's transport needs to provide an efficient and cost-effective transport system that includes bus, train, taxis and cars.
- Advising the Singapore Government on matters related to the land transport system; and
- Representing Singapore internationally in respect of matters relating to land transport.

**For more information, please contact:**

Aaron Chong  
Senior Manager, Media Relations  
Email : aaron\_chong@lta.gov.sg  
Office : +65 6396 1568 | Mobile : +65 9295 7319

Sarah Lua  
Assistant Manager, Media Relations  
Email : sarah\_lua@lta.gov.sg  
Office : +65 6396 1578 | Mobile : +65 9125 7894

## **NATIONAL INFOCOMM AWARDS 2014**

### **Winner for the Category of Most Innovative Use of Infocomm Technology (Private Sector - General)**

---

**Organisation:** DBS Bank

**Product/Solution:** Driving Optimal ATM Cash Management with Analytics

#### **Product/Solution Description**

As the largest bank in Singapore, DBS's ATMs are also one of the busiest in the world. More than 25 million transactions are conducted at its 1,100 ATMs every month. Any down time in a single ATM would mean inconvenience for its 4 million customers.

DBS embarked on a journey to execute against strategy to place customers at the heart of the banking experience – and to formulate a long-term solution that leverages analytics. The aim was to move away from reactive measures and to move into a preemptive model that will lower the occurrence of undesirable situations through forecasting, which will in turn improve the overall customer experience.

To make sure that its ATMs are operating efficiently, DBS uses its in-house designed and built solution in partnership with SAS Analytics, to be better able to understand customer behaviour, forecast demand of cash, and to optimize the reloading process on their ATM channel in Singapore.

DBS set out to accurately assess customers' withdrawal patterns across the entire network for each individual machine. Using these forecasts, the bank was able to generate an optimized schedule that achieved minimum cash outs and trips while being operationally realistic and robust.

The solution, the first-of-its-kind in the banking industry in Singapore, also allows the bank to cater to out-of-the-norm withdrawal patterns as a result of festivities or peak periods at month end. The bank was able to plan for more scheduled loadings to ensure that the machines do not run out of cash.

#### **Benefits**

- Cash out scenarios down by over 90 percent
- Reduced number of customers affected by ATM reloading by over 350,000 customers from previous year
- Increase ATM loading efficiency by 33%

## **About DBS**

*DBS - Living, Breathing Asia*

DBS is a leading financial services group in Asia, with over 250 branches across 17 markets. Headquartered and listed in Singapore, DBS has a growing presence in the three key Asian axes of growth: Greater China, Southeast Asia and South Asia. The bank's capital position, as well as "AA-" and "Aa1" credit ratings, is among the highest in Asia-Pacific. DBS has been recognised for its leadership in the region, having been named "Asia's Best Bank" by The Banker, a member of the Financial Times group, and "Best Bank in Asia-Pacific" by Global Finance. The bank has also been named "Safest Bank in Asia" by Global Finance for six consecutive years from 2009 to 2014.

DBS provides a full range of services in consumer, SME and corporate banking activities across Asia. As a bank born and bred in Asia, DBS understands the intricacies of doing business in the region's most dynamic markets. These market insights and regional connectivity have helped to drive the bank's growth as it sets out to be the Asian bank of choice. DBS is committed to building lasting relationships with customers, and positively impacting communities through supporting social enterprises, as it banks the Asian way. It has also established a SGD 50 million foundation to strengthen its corporate social responsibility efforts in Singapore and across Asia.

With its extensive network of operations in Asia and emphasis on engaging and empowering its staff, DBS presents exciting career opportunities. The bank acknowledges the passion, commitment and can-do spirit in all of our 21,000 staff, representing over 40 nationalities. For more information, please visit [www.dbs.com](http://www.dbs.com).

### **For more information, please contact:**

Fen Peh  
Group Strategic Marketing & Communications, DBS Bank  
Email : [fenpeh@dbs.com](mailto:fenpeh@dbs.com)  
Tel : +65 6818 6519 | Mobile: +65 9278 0089

## NATIONAL INFOCOMM AWARDS 2014

### Winner for the Category of Most Innovative Use of Infocomm Technology (Private Sector - SME)

---

**Company:** Singapore District Cooling

**Product/Solution:** iTransform

#### **Product/Solution Description**

iTransform is an initiative to significantly improve the effectiveness and efficiency of a lean workforce by leveraging the explosion in mobility and data technologies. The “i” in “iTransform” emphasises the focus on the key element of any work processes: the individual. The iTransform mobile app empowers each individual within SDC’s team with its two key features: 1) a master form generator that generates customisable forms on the fly to streamline data collection and inputs about the network, and 2) a geolocation system that facilitates the collection and analysis of location-specific data about the network. iTransform seeks to enable data-driven systems and processes that would allow operational response and maintenance teams to efficiently execute scheduled and adhoc tasks, with the strategic intent to transform the current maintenance and operations from a paper-intensive, laborious and slow system to a real-time and location-sensitive plant operations and maintenance system.

#### **Benefits**

iTransform was designed around two key components.

- A user-friendly Flexible Form Generator **TransForm** that can generate basic electronic apps (electronic forms) “on the fly” and which is easily used by technical staff with minimum training. With the insight that almost all work processes involves a “form” for recording, transferring or inputting data, it is clear that to collect all possible relevant data, huge numbers of forms of various types would be required. Paper forms will generate mountains of data that are impossible to digest or use; single electronic apps for each separate form would be prohibitively expensive to implement the vision to collect and use all relevant data, not to mention the laborious efforts required to finetune and change the format of each electronic form as requirements change. A goal was to develop a “Mother of All Forms” that generates forms (apps) as required.
- A pervasive web of low cost devices **TransMap** that creates a geolocation system which not only fills the gaps of publicly available systems but also enables location-sensitive electronic forms. Leveraging the advances of geolocation technologies, the insight is that location data (“where”) is the final missing parameter in the jigsaw puzzle of required data parameters to

complete the Holy Grail of “who”, “what”, “when”, “where”, “why” and “how” for all work processes. TransMap would enable a whole new potential for efficient and effective operations. For example, it could enable forms to only be accessed when the technician is actually at a specific pre-designated location to ensure that forms are filled up accurately; or it could enable data analytics of movement patterns and dwell times of each worker or the aggregate population; or it could simplify asset tracking and inspection.

### **Innovative and Practical Use of Technologies**

- Use of low cost Smart Sensors and Smart Devices. The sensor network is created using Bluetooth Low Energy active devices along with readily available mobile in-device sensors such as accelerometers, gyrometers, and barometers to provide accurate indoor or underground location and navigation information for efficient and safe plant maintenance.
- Flexible electronic form and map images creation on the fly as required by operations tasks.
- Active tasks triggering and notifications
- User ability to scale up the deployment of sensors to larger networks on an as-needed basis.

### **About Singapore District Cooling**

Singapore District Cooling Pte Ltd (“SDC”) is a subsidiary of Singapore Power providing regulated and non-regulated district cooling services in the premium Marina Bay area. District cooling is an innovative urban utility service involving the centralised production of chilled water that is piped to commercial buildings for the purposes of air-conditioning. The chilled water is distributed primarily through a network of pipes running through the Common Services Tunnel in Marina Bay.

Centralised production of chilled water reaps economies of scale and synergies, which results in substantive space, cost and electricity savings. SDC’s Marina Bay district cooling network is one of the largest district cooling networks in the world. It is saving some 30-40% in costs and electricity for customers annually.

SDC commenced commercial operations in May 2006. It currently has two major plants with numerous chillers in the basements of One Raffles Quay and the Marina Bay Sands Integrated Resorts. Developments served by the district cooling system include One Raffles Quay, Marina Bay Sands, The Sail @ Marina Bay, Marina Bay Financial Centre, Asia Square, Ocean Financial Centre, Gardens by the Bay and two MRT stations. Plans are underway to also provide district cooling to new developments like Marina One and the Singapore Chinese Cultural Centre as they are completed in the years ahead.



**For more information, please contact:**

Jimmy Khoo

Managing Director

Email : [jimmykhoo@singaporepower.com.sg](mailto:jimmykhoo@singaporepower.com.sg)

Contact No.: +65 9781 5074

Ang Chee Keong

General Manager (Operations)

Email : [cheekeongang@singaporepower.com.sg](mailto:cheekeongang@singaporepower.com.sg)

Contact No.: +65 9138 9726

## **NATIONAL INFOCOMM AWARDS 2014**

### **First Runner-up for the Category of Most Innovative Infocomm Product/Solution**

---

**Company:** ViSenze Pte. Ltd.

**Product/Solution:** Visual Search (ViSearch)

#### **Product/Solution Description**

ViSearch is a powerful Vision-as-a-Service ("VaaS") platform that delivers state-of-the-art picture-to-picture matching technology in the cloud readily and cost-effectively. ViSearch uses proprietary computer vision technology to solve the problem that meta-data search engines cannot address today when processing images and videos. Unlike search engines that process only text data, ViSearch detects objects and process the pixels in images. This enables ViSearch to search accurately against visual databases using only images as queries. ViSenze's technology is also able to receive image or video data-feed from any sensors, run real-time processing to (a) detect and recognise, and/or (b) detect and search.

#### **Benefits**

Used by companies in eCommerce, mCommerce, database management, and affiliate marketing, ViSearch processes tens of millions of image queries a day. Key international clients today include Rakuten Taiwan and Zalora.

Key benefits experienced by ViSearch users include:

- Uplift conversion (by up to 35% vs keyword search) by helping online shoppers to find products better, faster and more efficiently.
- Increase in productivity (by up to 90% in some cases) arising from improved speed and accuracy of retrieval from large-scale databases, anytime, anywhere using images only.
- Better Customer Relationship Management (CRM) in terms of faster response rate
- Improved efficiency in cataloguing visual items and merchandises
- Improved mobile search experience with real-time visual search capability anytime and anywhere

#### **About ViSenze**

ViSenze was founded by computer vision scientists and technology entrepreneurs with the sole objective of simplifying the visual web. Through cutting-edge R&D based on real world problems, ViSenze develops simple visual search & recognition tools to help businesses - in eCommerce, mCommerce, online display advertising, software development & database management - address challenges of exploding visual content on different digital platforms. ViSenze originates from NExT, a leading research centre jointly established between National University of Singapore

(NUS) and Tsinghua University of China. ViSenze is invested by Rakuten Ventures, Walden International and UOB Venture Management.

ViSenze is well recognised in Singapore and international media for its technology, innovation and capability & its awards include:

1. A Technology Enterprise Commercialisation Scheme (TECS) Awardee from SPRING SINGAPORE
2. A SiTF 2013 Winner (Emerging Technology)
3. A 2014 Red Herring Top 100 Asia Winner

**For more information, please contact:**

Shirley Tan

Marketing

Email : Shirley@visenze.com

Contact No.: +65 8181 8872

## **NATIONAL INFOCOMM AWARDS 2014**

### **Second Runner-up for the Most Innovative Infocomm Product/Solution**

---

**Organisation:** Nanoveu Pte Ltd

**Product/Solution:** **EyeFly3D Nanoglass:** World's first 9H tempered glass nanotechnology screen protector for smartphones and tablets that enables viewing of 3D content without the need for 3D glasses.

#### **Product/Solution Description**

Glasses-free 3D display on mobile devices through a nanotech screen protector and free apps. EyeFly3D utilizes lenticular lenses engineered at a sub-pixel level. This means the lenses are invisible to the eye and do not cover any pixels, so there is no loss of brightness or resolution even in ordinary 2D. When used with proprietary rendering apps, the nano-lenses of the EyeFly3D send different views of an object or scene to the user's left and right eyes, which the brain in turn interprets as 3D with an increased depth of field. Autostereoscopic content is rendered automatically in 3D, and 2D video is converted to 3D in real-time, without distortion and with clearer, brighter and sharper images, videos and text. Optical-quality lenticular lenses are precision engineered on a nano scale and the nano-imprinted lens array is incorporated into an ultra-slim screen protector – the layers of which serve to enhance clarity and reduce moiré and distortion. The technology behind the products leverages on recent advances made in Nanoimprint Technology (NIT). NIT is an advanced patterning technique that offers very attractive features compared to what industry-standard photolithographic techniques can achieve, particularly for sub-100nm applications. The placement and positioning of the nano lenses in this patent-pending nano-imprinting process is specific to the form factor of each model of smartphone or tablet.

#### **Benefits**

EyeFly3D nanotechnology brings affordable yet superb quality 3D viewing to the masses in a convenient and portable form. Users can now enjoy 3D content on their mobile devices in both landscape and portrait modes without affecting their 2D experience or the sensitivity of their mobile devices. The product can be customized with colour and artwork, making it not just a tech gadget but a lifestyle accessory as well. It is in production for select iOS as well as Android devices, including a full-face version for the iPhone 6 and 6 Plus. This will offer full protection of the screen including the curved sides of the glass – and enable 3D viewing as well. To further simplify installation of the EyeFly3D Nanoglass, Nanoveu has designed and produced an applicator jig which doubles as a snap-on protective case for the iPhone 5.

#### **About Nanoveu**

Nanoveu is a Singaporean company, owned by Singaporeans, incorporated and based in Singapore with representative offices in the United States and Europe. Nanoveu was incorporated in October 2012 upon approval of ETPL GAP funding.

Nanoveu is a leading provider of thin film based nano structures that shape our vision when viewed through high resolution smart devices. Using a patent-pending process of manufacturing, the company's first breakthrough product, EyeFly3D, delivers distortion-free 2D/3D video and photos on smartphones and tablets.

The original EyeFly3D product made with Polyethylene Terephthalate was launched in January 2013. This was followed by a commercial product launched in April 2013. The Nanoglass, which vastly improves on the original technology and design, was launched in June 2014 and is currently sold worldwide. Today, Nanoveu produces screen protectors in both tempered glass and film (PET) versions for the iPad Air 2, iPad Air, iPhone 5/5C/5S, iPhone 4 and iPod Touch 5. EyeFly3D Nanoglass for select android devices are in final stage production.

**For more information, please contact:**

Linette Tye  
Chief Marketing Officer  
Email: [LTye@nanoveu.com](mailto:LTye@nanoveu.com)  
Contact No: +65 6557-0155 Skype: linette.tye

Or

Juliana Stothard  
Operations Manager  
Email: [jstothard@nanoveu.com](mailto:jstothard@nanoveu.com)  
Contact No: + 65 9108-5585

## **NATIONAL INFOCOMM AWARDS 2014**

### **First Runner-up for the Most Innovative Use of Infocomm Technology (Public Sector)**

---

**Organisation:** National University Hospital (NUH), Tan Tock Seng Hospital (TTSH), National Healthcare Group Pharmacy (NHGPh) & Integrated Health Information Systems (IHiS)

**Product/Solution:** Outpatient Pharmacy Automation System (OPAS) at NUH, TTSH and NHG Pharmacy

#### **Product/Solution Description**

The Outpatient Pharmacy System (OPAS) at NUH, TTSH and NHG Pharmacy uses multi-disciplinary technologies and robotics to create possibly the region's most extensively automated and fastest high capacity medication prescription filling system.

OPAS comprises robotic armatures from the car manufacturing industry; conveyor, barcode, RFID and LED technologies from manufacturing assembly and precision industries; latest pharmacy automated dispensing machines; pharmacy information systems; which are integrated with 100% local custom-developed software.

Today, high speed loose tablet and box picking machines pick the drugs. For medicines that need manual picking, four different coloured LED lights on the shelves can guide staff to simultaneously pick right medication for four patients, speeding manual picking. All drugs are then placed in totes which move via a barcode-enabled conveyor.

Robotic armatures pick and store the totes on shelves behind the front dispensing counters. Right drugs are ensured via 2D barcodes, and correct totes via RFID.

Pharmacists at the front counters just reach for the totes behind them, and proceed with checking the medicines and patient medication counselling.

OPAS has also transformed conventional workflows. At TTSH, Pharmacy staff now meet with patients and review prescriptions at the Clinics instead of Pharmacy. They trigger robots to fill prescriptions before the patient arrives at the Pharmacy to collect their medication.

As a result, 40% of TTSH outpatients now get their medicines within 10 minutes, half the time before.

OPAS has automated 80% of the dispensing workflow. Rework rates have dropped by two-thirds, and over 50% of manpower saved at NUH and TTSH are redeployed to frontline areas.

Across TTSH, NUH, NHG Pharmacy, manpower savings total 48 staff or \$2.4 million a year. Annual productivity gains from the reduced prescription rework rates are \$5.8 million.

OPAS has expanded NUH, TTSH and NHG Pharmacies' ability to handle high prescription volumes safely and efficiently. There is less reliance on manpower, enabling them to easily scale up capacity to keep pace with demand from Singapore's ageing population.

The system is unique in its successful software development and integration of different types of robots and components, from various industries, into one well-orchestrated solution. It also involves the harmonising of three institutions' complex processes into one synergised workflow.

For example, as medication packaging in Singapore is varied, from boxes to blister packs or loose tablets, OPAS integrates different types of high speed automated packaging machines into one system. This has never been attempted before in the region, and possibly worldwide.

Some of the robotics, such as the ABB arm from the automobile industry, are being used for the first time in healthcare.

As a result, OPAS today can be easily replicated across institutions, and is future proofed. It is interoperable with different robotics, hospital systems and workflows, and scalable for future workloads.

## **Benefits**

With OPAS, prescriptions are filled faster; staff productivity is higher, and patients enjoy a better care experience. Medication dispensing accuracy, and thus patient safety, are also improved.

## **Shorter Waiting Times**

OPAS has halved patient waiting times, reducing TTSH's and NUH's average waiting times to 10 minutes, and NHG Pharmacy's to 15 minutes. Across the institutions, 20% of patients today, wait 5 minutes or less for their medicines.

This has been achieved through both automation and process re-design of the patient's entire journey from clinic to pharmacy.

Previously, staff would check prescriptions and order medication only upon the patient's arrival at the Pharmacy. 30% of the cases required rework due to patient's drug preferences, costs or remaining medicines at home.

With OPAS, pharmacy technicians now stationed at the clinics, help patients reconcile their medication before the order is transmitted into OPAS. This dramatically reduces re-work.

Packing starts at the pharmacy once OPAS receives the order. When the patient arrives at the pharmacy, his medication would be ready or near ready for collection.

With OPAS, rework rates at TTSH have dropped from 30% in 2011 to 5%; at NUH, from 30% to about 8%; and at NHG Pharmacy (Chua Chu Kang Polyclinic) from 15% to 8%. Productivity gains from the reduced prescription rework accrue to \$5.8 million a year across the three institutions.

### **Enhanced Patient Safety**

Higher automation and LED-light guided manual drug picking reduce manual errors. They also enable the pharmacists', who are relieved of manual tasks, to perform 100% reviews of prescriptions and spend more time with patients. These enhance patient safety.

OPAS implementation is in phased volume ramp-ups, to minimize operational disruptions. With OPAS' full implementation at NUH (end 2014) and TTSH (early 2015), over 2,500 outpatients will benefit daily (equivalent to 692,600 outpatient visits yearly).

At NHG Pharmacy's Choa Chu Kang Polyclinic branch, OPAS benefits 800 patients daily. By end 2015, when rolled out across nine NHG Polyclinics, it will benefit 6,400 patients daily (1.77 million polyclinic visits annually).

### **Higher Productivity**

Automation and job redesign have increased staff's job satisfaction, leading to lower staff turnover and related manpower costs. This also translates to better service and patient care.

OPAS has also enabled manpower savings of 48 staff or \$2.4 million each year across the three institutions. The staff are redeployed to frontline areas to serve more patients and expand services.

OPAS' First-in-First-out picking rules enable faster and more accurate auto-loading and sorting of medication, leading to better inventory management and productivity. OPAS can be easily scaled up to expand the Pharmacies' capacities in tandem with the rapid rise in patient volumes with Singapore's ageing population. These are



important in achieving cost effective operations in line with Singapore's goal of providing affordable healthcare for all.

.....

### **About National University Hospital (NUH)**

NUH is a tertiary hospital and major referral centre for a comprehensive range of medical, surgical and dental specialties including Cardiology, Gastroenterology and Hepatology, Obstetrics and Gynaecology, Oncology, Ophthalmology, Paediatrics, Orthopaedic Surgery and Hand and Reconstructive Microsurgery. The Hospital also provides organ transplant programmes for adults (in kidney, liver and pancreas) and is the only public hospital in Singapore to offer a paediatric kidney and liver transplant programme.

Staffed by a team of healthcare professionals who rank among the best in the field, NUH offers quality patient care by embracing innovations and advances in medical treatment.

In 2004, NUH became the first Singapore hospital to receive the Joint Commission International (JCI) accreditation, an international stamp for excellent clinical practices in patient care and safety. Today, patient safety and good clinical outcomes remain the focus of the hospital as it continues to play a key role in the training of doctors, nurses and allied health professionals, and in translational research which paves the way for new cures and treatment, offering patients hope and a new lease of life.

A member of the National University Health System, it is the principal teaching hospital of the NUS Yong Loo Lin School of Medicine and the NUS Faculty of Dentistry. For more information, please visit [www.nuh.com.sg](http://www.nuh.com.sg)

### **About Tan Tock Seng Hospital (TTSH)**

TTSH is one of Singapore's largest multi-disciplinary hospitals with more than 160 years of pioneering medical care and development. The hospital has 36 clinical and allied health departments, 15 specialist centres and is powered by more than 6,000 healthcare staff.

TTSH sees over 2,000 patients at its specialist clinics and some 460 patients at its emergency department every day. TTSH is part of National Healthcare Group, providing holistic and integrated patient care. With a strong quality culture steeped in patient safety, TTSH constantly challenges itself to provide faster, better, cheaper and safer care for patients.

To achieve this, the hospital keeps abreast and believes in investing in its staff, facilities, medical technology and system improvements. In recognition of its commitment to excellent patient care and its comprehensive range of quality healthcare services, TTSH has been awarded the ISO 9001 certification and the prestigious Joint Commission International (JCI) accreditation. [www.ttsh.com.sg](http://www.ttsh.com.sg)

### **About National Healthcare Group Pharmacy (NHGPh)**

National Healthcare Group Pharmacy, a business unit of National Healthcare Group, manages the pharmacy services and retail pharmacies at all NHG Polyclinics. It aims to support its customers to achieve the best results for their prescribed therapy, and promote the safe and responsible use of medication.

At the nine NHG Polyclinics, NHG Pharmacy works collaboratively with the physicians and other healthcare professionals to manage the patients with chronic illnesses. Patients also regularly consult the pharmacists for treatment of their minor ailments.

**About Integrated Health Information Systems (IHiS)**

IHiS is a healthcare-IT leader, transforming patient care through excellence in technology. Managing highly integrated systems across Singapore's public healthcare sector, its IT professionals support about 40,000 healthcare staff at all public hospitals, national specialty centres and polyclinics.

IHiS architects and oversees the performance of the clinical, business and healthcare analytics systems of the healthcare institutions. It played a key role in six Singapore hospitals becoming among the first public institutions in the Asia Pacific region to achieve HIMSS EMRAM Stage 6, an international benchmark for advanced technology used to in patient care.

IHiS is at the forefront of innovation, driving new standards in quality care. [www.ihis.com.sg](http://www.ihis.com.sg)

.....

**For more information, please contact:**

Ida Lim

Director, Corporate Affairs, IHiS

Email : [ida.lim@ihis.com.sg](mailto:ida.lim@ihis.com.sg)

Office : +65 6594 1697 | Mobile: +65 9106 3782

## **NATIONAL INFOCOMM AWARDS 2014**

### **Second Runner-up for the Category of Most Innovative Use of Infocomm Technology (Public Sector)**

---

**Organisation:** National Environment Agency

**Product/Solution:** **Integrated Environment System (IES)** [A real time environment monitoring and operational centre designed to fully integrate different types of environment sensing systems]

#### **Product/Solution Description**

IES aims to harness all environmental sensing systems/ assets within and outside NEA and to leverage and develop capabilities such as predictions of air quality and dengue cluster, formation of wind gust and video/business analytics to detect undesirable behaviour or industry discharges.

#### **Benefits**

A 'Unified Sensors Platform' that brings together all types of sensors data (such as ambient air pollution, stack emission, weather stations, radiation, coaster water and inland water, construction site noise, live video streams from mobile and stationary vehicles) thus allowing users an overview situation awareness across the entire environmental monitoring spectrum.

In addition, IES is equipped with environment predictive models (e.g. air pollution, wind gust, heavy rainfall, dengue cluster) that takes in real-time sensors data and generates prediction such as:

- a. up to 30 minutes ahead for heavy rain and wind gust
- b. several weeks in advance for dengue cluster formation
- c. 24 hours ahead for air pollution

Access to these information on a GIS map by overlaying data from different domains and visualising in a holistic manner empowers users to understand the cause/ effects contributed by different environment factors, or take pre-emptive measures to mitigate risks.

Public agencies, private entities, research institutions and the public can gain access to real-time environment information through a set of Application Programming Interfaces (APIs) in a timely manner, as well as enabling them to develop capabilities to model and simulate environment patterns to aid predictions.

**About the National Environment Agency (NEA)**

Formed on 1 July 2002, the National Environment Agency (NEA) is the leading public organization responsible for improving and sustaining a clean and green environment in Singapore. The NEA develops and spearheads environmental initiatives and programmes through its partnership with the People, Public and Private sectors. It is committed to motivating every individual to take up environmental ownership and to care for the environment as a way of life.

By protecting Singapore's resources from pollution, maintaining a high level of public health and providing timely meteorological information, the NEA endeavours to ensure sustainable development and a quality living environment for present and future generations.

**For more information, please contact:**

Jacky Bek

Assistant Director (Application Services)

IT Department

6731 9141

[Jacky\\_bek@nea.gov.sg](mailto:Jacky_bek@nea.gov.sg)

## **NATIONAL INFOCOMM AWARDS 2014**

### **First Runner-Up for the Category of Most Innovative Use of Infocomm Technology (Private Sector - General)**

---

**Organisation: Banking Computer Services Pte Ltd**

**Product/Solution: Fast And Secure Transfers (FAST)**

#### **Product/Solution Description**

Banking Computer Services Pte Ltd (BCS) operates the Singapore Automated Clearing House which provides the Singapore Dollar and US Dollar Cheque Truncation Systems (CTS), Interbank GIRO system and FAST (Fast And Secure Transfers).

Over the years, BCS has continually enhanced the clearing and payments infrastructure of Singapore. These were mainly driven by the desire to improve efficiency and convenience in the clearing and settlement of payments in Singapore, through the use of new and emerging technologies.

Rapid technological developments have encouraged the growth of highly innovative payment products and services for businesses and consumers. However, these innovations need to be supported by a secure and efficient infrastructure to facilitate the timely movement of funds across the bank accounts of users. FAST is the latest innovative service that was implemented earlier this year.

FAST, officially launched on 17 March 2014, was conceptualised and developed as a national utility e-payment infrastructure that supports the real-time transfer and collection of funds any time of the day and any day of the week. It adopts the widely-accepted international message standards, ISO20022, and technologies that will support payment innovations, as well as straight-through and real-time processing.

All the major retail banks in Singapore are connected via FAST to offer their customers the means to send and receive funds securely and almost instantaneously around the clock. This marks a significant improvement in turnaround time for interbank funds transfer which takes up to 3 working days offered by Interbank GIRO.

**Benefits**

FAST is a timely initiative. Laying the groundwork for the banking and payments industry to introduce more productive and innovative e-payment solutions to increasing tech-savvy and lifestyle-driven users.

E-payments offer significant upside potential in cost savings for the banking industry and end-users. With its real-time capability and enhanced file format, FAST can offer the following benefits:

- a) Increased adoption of e-payments, as consumers and businesses can complete the funds transfer immediately with almost instantaneous confirmation of payment and receipt;
- b) Reduced cost of managing payments, as lesser resources and shorter time are needed to initiate, validate and monitor payments;
- c) Ease of reconciliation, as enhanced file format allows more payment details to be included in bank account statements; and
- d) Round the clock ease of making payments as FAST is available 24 x 7.

Mrs Ong-Ang Ai Boon, Director ABS, said, "We are pleased that FAST is one of the winners of the NIA 2014. FAST is a significant milestone in Singapore's payment history as it facilitates almost instantaneous transfer of funds across customer accounts of the participating banks. We congratulate BCS and the 14 FAST participating banks for their continuous effort to introduce innovative e-payment solutions as Singapore drives towards becoming a Smart Nation. "

**About Banking Computer Services Pte Ltd**

Banking Computer Services Private Limited (BCS) implements, manages and operates clearing and payment infrastructure in Singapore.

Since BCS' inception in 1976, BCS has spearheaded several large-scale, national payment projects that have enhanced the service offerings of the financial services industry in Singapore.

With many years of experience in implementing and managing nationwide payment projects, BCS has proven itself to be the reliable payment service provider at the forefront of the payment scene.

For more information on BCS, please refer to BCS website at [www.bcs.sg](http://www.bcs.sg).

**For more information, please contact:**

Tan Ching Ching

Banking Computer Services Pte Ltd, Business Development and Communication

Email : [tanchingching@bcs.sg](mailto:tanchingching@bcs.sg)

Office : +65 6416 9055

## **NATIONAL INFOCOMM AWARDS 2014**

**Second Runner-up for the Category of Most Innovative Use of Infocomm Technology  
(Private Sector - General)**

---

**Organisation:                      National Trades Union Congress**

**Product/Solution:                U Portal – A digital journey for the Labour Movement**

### **Product/Solution Description**

U Portal is the Labour Movement's public platform of three integrated digital channels, i.e. web, social media and mobile, which serves as a one-stop shop for its users while allowing each union, business unit and membership community and other stakeholders to maintain their identity and relevance to their targeted audience.

Online electronic services are integrated with U Portal. This allows the Labour Movement to deliver more convenient and accessible services to its members and the public, which in turn, helps to improve productivity. U Portal is also tightly integrated with the back-end Customer Relationship Management (CRM) system and SAP Finance system for operational efficiency.

Using Web 2.0 technology, U Portal unifies content from various stakeholders into a centralised content management system and integrates 58 websites under one banner, while still honouring the unique needs of each stakeholder within the family. Common content, such as news and membership privileges, is cross-published on the various websites. This ensures that information is shared across all 58 websites in a timely and efficient manner.

To further enhance user convenience, NTUC introduced MyNTUC and Workplace Advisory mobile apps which allow members to access information on the go. MyNTUC app is a role-based and location-based mobile app which tailors to different user groups, i.e. union leaders, members and the public to access a range of content, from the latest news stories to live streaming, and e-Services. The Workplace Advisory mobile app provides information on workplace issues, such as breach of contract, unfair dismissal and employment rights. It also incorporates a private messaging function for union members who wish to seek workplace advice from NTUC workplace advisors. This mobile app is also connected to the PME LinkedIn Group and fellow PMEs via a LinkedIn interface.

To better engage members, NTUC and selected unions leverage social media platforms such as Facebook, Twitter, LinkedIn and YouTube. There are 34

Facebook pages within the Labour Movement. The most popular one is NTUC Membership which is a strong social platform to collaborate with members. Workshops have been held to train union leaders in the use of social media as a way of connecting with members. Armed with this knowledge, 23 unions have set up their own Facebook pages to enhance interaction with members. Once uploaded onto the central content management system, U Portal's news content is automatically published onto the unions' Facebook pages. NTUC's interaction with the online community doesn't stop there. Because it also includes relevant Facebook posts and queries by the public in its customer relationship management (CRM) system, its officers are able to track responses more efficiently and better understand users' needs.

U Portal presents a challenge because of the large amount of computing resources it requires during peak periods to power elements such as live streaming and special membership privilege offers. Cloud computing has enabled NTUC to deliver cheaper, better and faster services in this regard, while catering for growth and ad hoc usage.

NTUC is the first organisation in Singapore to deploy the OneKey token as a password mechanism. By leveraging on the National Authentication Framework (NAF) and adopting OneKey as the password mechanism for its online services, members no longer have to rely on complex passwords. It also strengthens the organisations' defences against potential cyber-attacks.

### **Benefits**

U Portal represents the Labour Movement's digital journey. It started from rebranding online using Web 2.0 technology to SoLoMo (i.e. Social, Location and Mobile). The web, social and mobile digital channels are tightly integrated with the centralised content management system so as to provide a holistic and consistent messaging and a seamless user experience as well as to increase productivity.

Moving away from a paper-based process to online services has enhanced the productivity of NTUC and unions. At the same time, business process re-engineering and workflow automation have led to savings in resources and greater operational efficiency.

The use of digital platforms has improved communication processes between NTUC/unions and its members. Now, the organisation can release news and information in a timely manner to its audiences via a range of channels. Additionally, the provision of e-Services designed from a member's perspective and mobile apps offer the convenience of 'anytime, anywhere, on the go' to members and the public.



The use of social media has encouraged user participation and built vibrant, active online communities.

Finally, Cloud reduces time-to-market and resources can be scaled up on-demand.

### **About National Trades Union Congress**

The National Trades Union Congress (NTUC) is a national confederation of trade unions in the industrial, service and public sectors in Singapore. NTUC's objectives are to help Singapore stay competitive and workers remain employable for life; to enhance the social status and well-being of workers; and to build a strong, responsible and caring labour movement. NTUC's vision is to be an inclusive labour movement for all collars, ages and nationalities. NTUC is at the heart of the Labour Movement, which comprises 60 affiliated unions, one affiliated taxi association, 11 social enterprises, five related organisations and over 830,000 members. For more details, visit [www.ntuc.org.sg](http://www.ntuc.org.sg).

### **For more information, please contact:**

Melissa Koh  
Senior Consultant  
NTUC Corporate Communications Dept.  
DID 6213 8197  
HP 9771 2210  
Email [melissa\\_koh@ntuc.org.sg](mailto:melissa_koh@ntuc.org.sg)

**NATIONAL INFOCOMM AWARDS 2014**  
**First Runner-up for the Category of Most Innovative Use of Infocomm Technology**  
**(Private Sector - SME)**

---

**Company:** Singapore Transport Association

**Product/Solution:** Driving Towards a Safer Road - Mobileye®

**Product/Solution Description**

In today's increasingly challenging business environment, SMEs need to focus on upgrading their productivity and deliver value to their customers. The advantages of assistive driving technologies do not just apply in our everyday vehicles, but also in heavy industrial vehicles. Singapore Transport Association (STA) with the support of Safer Roads Industry Taskforce and SPRING Singapore, developed a driver safety framework that creatively leveraging on Mobileye® advanced driver assistive technologies to influence driver behaviour, foster better driving practices, improve driver safety and boost the productivity of member companies. The framework also includes educating drivers on the tenets of good driving behaviour, avoiding and eradicating any dangerous driving habits.

Through the use of Infocomm, real-time driver's behaviour data of participating companies are collected, processed and analysed to obtain driver's driving risk profile, company risk profile and Industry risk profile. Companies are informed of their risk profile and recommended with risk mitigation measure. Companies will be also be bench marked against the Industry risk profile and Companies that have higher risk profile than the Industry risk profile will be highlighted and closely monitored by STA.

**Benefits**

SMEs need to harness technology to increase their productivity and there is a strong business imperative for transport companies to minimise their downtime and costs from unnecessary accidents. With the Driver Safety Framework, companies will be able to manage their road safety risk and reduces the road traffic accident, downtime and improve its services and productivity. Fuel saving can also be achieved through better driving behaviour.

Various Insurance companies have agreed to provide vehicle insurance premium rebate of up to 10% for vehicles that are involved in the framework and this helps companies to stabilize their motor insurance spending. The insurance companies are: Tokio Marine Insurance, India International Insurance, QBE Insurance and NTUC Income.

**About Singapore Transport Association**

Singapore Transport Association (STA) has a history dated back more than 75 years and has a growing membership of more than 100 small and medium size local companies. It is formed with the goal of forging trades ties, generating business opportunities, as well as being an entity to seek benefits, and raise concerns with the government.

The Association comprises of members who are mainly in the logistics/transport industry with major players such as Poh Tiong Choon Logistics Limited, Woodlands Transport Service Pte Ltd, Kim Ee Logistics Pte Ltd and Bok Seng Logistics Pte Ltd.

**For more information, please contact:**

Dave Ng  
Chairman  
Email : [stamail@singnet.com.sg](mailto:stamail@singnet.com.sg)  
Contact No.: +65 9761 8287

Fonda Cheng  
Project Manager  
Email : [fonda\\_cfy@yahoo.com](mailto:fonda_cfy@yahoo.com)  
Contact No.: +65 9615 7341

## **NATIONAL INFOCOMM AWARDS 2014**

**Second Runner-up for the Category of Most Innovative Use of Infocomm Technology  
(Private Sector - SME)**

---

**Company:** Eyeota Pte Ltd

**Product/Solution:** Eyeota Audience Data Marketplace

### **Product/Solution Description**

Eyeota's proprietary Audience Data Marketplace contains over 1 billion profiles worldwide, making Eyeota the leading global platform for ad targeting data & audience insights. The platform collects anonymised demographic, psychographic, brand preference, interest profile & purchase intent data from around the internet, supplemented with other valuable offline data sets (such as those supplied by Experian & Roy Morgan) which are then fed in to the online advertising ecosystem to enhance ad relevance and campaign efficiency.

Eyeota's data is supplied to advertisers in the form of anonymized audience segments, and Eyeota is fully privacy compliant.

### **Benefits**

Eyeota's platform demonstrates world-leading capabilities in data collection, management and distribution, at scale. With direct integration with over 50 online advertising platforms, Eyeota has maximised the ease of access to the data in its marketplace for both brands and publishers, and is delivering access to its data to over 95% of global online media buying.

Through the use of Eyeota's audience segment data, brands can stop spending budgets on advertising to users who are not interested in their products, and instead, can target segments that are significantly more likely to convert in to customers or brand advocates.

Using Eyeota's technology, advertisers and website owners alike can monitor their respective audiences, and then cross-reference them with Eyeota's vast repository of data to derive insights in to the demographic, psychographic, brand preference, interest profile & purchase intent of their user base.

### **About Eyeota**

Eyeota is the global leader for local audience data and the leading source for third-party audience targeting data. Eyeota provides marketers with the data they need to

reach the right online audiences and cut campaign waste whilst also enabling publishers to monetize their audiences more widely.

In addition, our data delivers deep audience insight to both marketers and online publishers to help them understand their customers in a new way – as human beings. Eyeota supplies third party audience data to all major global and regional ad buying platforms, DSPs and ad networks. The company was founded in 2010 and has offices in London, Berlin, Düsseldorf, Singapore and Sydney.

**For more information, please contact:**

Laura Keeling  
Marketing Manager  
Email: lkeeling@eyeota.com  
Contact No.: +65 8606 4106

Kevin Tan  
CEO  
Email: ktan@eyeota.com  
Contact No.: +65 9117 3718