



CASE STUDY

Panasonic Autonomous Delivery Robots - HOSPI - Aid Hospital Operations at Changi General Hospital

Client: Changi General Hospital (CGH)

Location: Singapore

Singapore, Singapore - July 23, 2015 - In line with the country's goal of becoming a Smart Nation, Panasonic System Solutions Asia Pacific (PSSAP) and Changi General Hospital (CGH) are implementing assistive robotics technology to improve operational efficiency of a hospital. Experimental use of the Panasonic autonomous delivery robots, HOSPI, began in February 2015 and they are being implemented in phases. CGH is the first hospital outside of Japan to utilise HOSPI. As part of the hospital's porter management system, the four HOSPI are able to deliver fragile and bulky medicine, medical specimens and patients' case notes 24/7, easing manpower constraints.

HOSPI is equipped with security features to prevent tampering, theft and damage during delivery. The robot's contents can only be accessed with ID cards. Automation enables HOSPI to move around using the lifts and between facilities in CGH's Main Building and The Integrated Building on its own, delivering medicine and specimens.

Rubina Gan, Assistant General Manager, PSSAP, noted, "Singapore has often been dubbed a 'living laboratory' for companies to experiment and co-create solutions. Panasonic is excited to work together with Changi General Hospital to phase in our HOSPI robots for full deployment so that eventually medical caregivers' time is freed up for dedicated patient care and treatment. CHART's (Centre for Healthcare Assistive and Robotics Technology) opening cements how technology and solutions can play a key role in healthcare in the future."

HOSPI is equipped with sensors and programmed with the hospital's map data to avoid obstacles such as patients in wheelchairs and complete deliveries with minimal supervision. New hospital routes can be programmed in advance, allowing flexibility. The autonomous robot communicates and relays information on its whereabouts to the control centre, enabling its location to be monitored and recorded at all times.

Selina Seah, Assistant Chief Executive Officer, Changi General Hospital, commented, "HOSPI can help us save manpower and time in a simple and practical way especially with the challenges we are facing with an aging workforce whilst our healthcare facilities increases in size and distance. By harnessing autonomous technology like HOSPI, we can optimise our workforce and improve productivity. We welcome Panasonic as a CHART partner to work with us to innovate healthcare operations and patient care."

Panasonic is also test-bedding the use of Reysone, an electric care bed that separates and converts into a wheelchair safely and conveniently, at CGH. This 2-in-1 care bed not only facilitates the transfer and movement of patients, but also eliminates the need for additional storage areas. The Reysone test-bed will run for six months.

By continuing to build a solid foundation for healthcare robotics, Panasonic aims to deploy HOSPI to other local hospitals in future.

Model	AP-3020A003
Dimension	630mm(W) × 725mm(D) × 1386mm(H)
Weight	Approximately 170 kg with battery
Operation Duration	Approximately 9 hours (lead battery)
Charging time	Approximately 4.5 hours
Load Capacity	Maximum 20 kg / 6 medication trays (350mm(W)x440mm(D)x390mm(H) configurable)
Delivery objects	<ul style="list-style-type: none"> - Fragile / Bulky Medicine - Medical specimens e.g. lab samples, infectious blood samples - Documentation e.g. patients' case notes / medical records
Navigation	<ul style="list-style-type: none"> - Autonomous travel via pre-programmed hospital map data (flexible in adapting to new routes e.g. new hospital ward, new hospital wing) - Avoids obstacles e.g. patients in wheelchairs, visitors, through sensors - Utilising Wi-Fi, HOSPI communicates and relays location details / operation history to the hospital control centre. A built-in camera option is also available.
Security	Highly secured - accessible only using ID cards to avoid tampering, theft and damage during delivery
Maximum speed	1.0m/second (configurable)

About Panasonic Asia Pacific

[Panasonic Asia Pacific](#) provides the whole range of the brand's products and solutions across the Southeast Asia and Oceania (APAC) region, covering 27 countries including 10 offices in Australia, Cambodia, Indonesia, Malaysia, Myanmar, New Zealand, Philippines, Singapore, Thailand and Vietnam. Based in Singapore, Panasonic Asia Pacific regional headquarters focuses on creating A Better Life, A Better World by promoting its Business-to-Business portfolio while maintaining solid Business-to-Consumer growth. The region has 40 manufacturing sites, supporting Panasonic's global production activities in the housing, agriculture, energy solutions, appliances, components and devices sectors.

Panasonic System Solutions Asia Pacific

Based in Singapore, [Panasonic System Solutions Asia Pacific](#) is the B2B solutions division of Panasonic Asia Pacific Pte Ltd, the Southeast Asia and Oceania (APAC) subsidiary of Panasonic Corporation. Panasonic System Solutions Asia Pacific delivers B2B solutions for government and commercial enterprises of all sizes that cover unified business communications, mobile computing, data storage, security and surveillance, retail point-of-sale, visual communications (projectors, professional displays, digital signage) and imaging network solutions (broadcast and professional video).

About Changi General Hospital

[Changi General Hospital](#) (CGH) is an award-winning public hospital with over 1000 beds serving a community of 1.4 million people in eastern Singapore. CGH offers a comprehensive range of medical specialties and services, helmed by a highly experienced and skilled team of healthcare professionals who consistently deliver excellent health outcomes and care for patients. CGH's Mission is "To deliver the best patient care with passion and empathy". It has established itself as a centre of medical excellence with services such as the Integrated Sleep Service, Breast Centre @ Changi, Hepatobiliary Service, Vascular Surgery, Gastroenterology, Endocrinology and the Changi Sports Medicine Centre. CGH is a key partner and resource for the Eastern Health Alliance, the regional health system for eastern Singapore. CGH has been JCI (Joint Commission International) accredited since 2005.

Related Links

- [More Photos - Panasonic Autonomous Delivery Robots at Changi General Hospital](#)
- [Panasonic Singapore Homepage](#)
- [HOSPI product information \(Japanese\)](#)
- [Enriching Services in Healthcare through Panasonic HOSPI Robot](#)

Four autonomous delivery robots, called HOSPI, deliver (up to 20kg) goods such as medicine, medical specimens and case files within the hospital. [>>See more photos at Google+ Photo](#)



The content in this website is accurate at the time of publication but may be subject to change without notice.

Please note therefore that these documents may not always contain the most up-to-date information.

Please note that German, French and Chinese versions are machine translations, so the quality and accuracy may vary.