Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies
香港物流及供應鏈管理應用技術研發中心

For Immediate Release

LSCM R&D Centre Wins Four Awards at the 46th International Exhibition of Inventions of Geneva

"An Ultra-Wideband Activity Monitoring System for Solitary Elderly" and "Video Analytics for Resource Management" Win two Gold Medals

26 April 2018, Hong Kong — The Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM) won two Gold medals and two Silver medals with its four submission projects at the 46th International Exhibition of Inventions of Geneva. These achievements recognise LSCM's concerted efforts and enthusiasm in developing the core technological competencies in the logistics, supply chain, e-Commerce and related industries.

Mr Simon Wong, Chief Executive Officer of LSCM, said, "We are honoured to receive this recognition from the International Exhibition of Inventions of Geneva. Our award-winning projects are focused on serving a broad spectrum of users, and providing convenience and flexibility to the local community. We are pleased that LSCM stands out as a leader in initiating and facilitating innovation and technology adoption. It is our goal to continue to collaborate with the related industries and serve the community better, and we look forward to holding onto this prestigious honour for many years to come."

The award-winning entries are under the theme of smart city development, enhancing the effectiveness of city management and improving people's quality of living in Hong Kong. LSCM will continue its important efforts in inspiring continuous innovation and sustainable city development in Hong Kong.

Award-winning Projects
Gold Medal: An Ultra-Wideband Activity Monitoring System for Solitary Elderly

The world's population is rapidly ageing and the industries have been looking for novel technologies to ease manpower and resources needed for the rapid population growth.

LSCM has developed a monitoring system to measure the activity levels of older people and detect any abnormal conditions by using state-of-the-art ultra-wideband (UWB) and signal processing technologies. The users need not wear any device, the UWB radars installed in the system use sub-cm-order time-of-flight information to determine their breathing rate and track their location. The data collected can also be analysed to provide activity-tracker-style-alike measurements of sleep duration and daily activity levels. Daily activity goals can thus be recommended to encourage users to exercise and improve sleep quality. This low-cost and privacy-preserving system provides real-time feedback to help caretakers provide efficient remote monitoring service of the elderly.

Gold Medal: Video Analytics for Resource Management

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Hong Kong International Airport (HKIA), one of the busiest air-hubs in the world, serves over 72.9 million travellers a year and offers around 13,000 baggage trolleys throughout the airport. Maintaining the sufficient supply of trolleys at different pick-up points is crucial to the passenger satisfaction on airport services and success of airport operations.

In collaboration with the Chinese University of Hong Kong (CUHK) and Airport Authority Hong Kong (AA), this project has developed a real-time trolley supply monitoring system at the HKIA, using artificial intelligence research techniques for analysing video content and detecting baggage trolleys. The monitoring system can turn visual content of trolleys at pick-up points into trolley quantities using advanced image processing and machine learning techniques. The system connects to iOS and Android apps and provides the most updated information on the baggage trolleys to frontline staff, optimising resource allocation and delivering a world class passenger experience.

The system automatically blurs unrelated image content to protect the privacy of the passengers.

Silver Medal: An Ultra–Wideband Package Scanner for Inventory Management

LSCM has developed a portable and non-invasive scanner which uses ultra-wideband sensors and RF technologies. Utilising time-of-flight and waveform data collected by the sensors, the UWB scanner can analyse the inner conditions of an object by applying advanced digital signal processing techniques. This simple and easy-to-use device can be applied to any inventory control or quality assurance system without unpacking stock, ensuring an effective workflow and increased productivity.

Silver Medal: Smart AP – Wi-Fi Positioning and Optimisation for a Smart City

In collaboration with the Hong Kong University of Science and Technology (HKUST), this project has developed a fusion-based location sensing technology using Wi-Fi signal, which remarkably improves the accuracy to position people indoors and enables novel and smart location-based applications such as indoor navigation, personalised recommendation, crowd analysis and people flow control. The location sensing technology, a software suite which fuses Wi-Fi with other signals on mobile or router platforms, achieves significantly higher positioning accuracy. It can reduce the position error to less than 2.5 metres in the most general environment, three times better than traditional approaches.

Facilitating the collection of real-time city data, this technology creates immense social value by providing timely location-based personalised services to the public, such as finding missing people, pets or assets. With the aim of embracing innovation and technology in the community, this technology is in collaboration with commercial partners and has been successfully trialled in malls and hospitals in Hong Kong.

Running from 11 to 15 April, the 46th International Exhibition of Inventions of Geneva, which is arranged under the patronage of the World Intellectual Property Organization (WIPO), the Swiss Government and the City of Geneva, showcases innovations and inventions from around the globe. The exhibition is an important invention exhibition, attracting over 700 exhibitors from 40 countries.

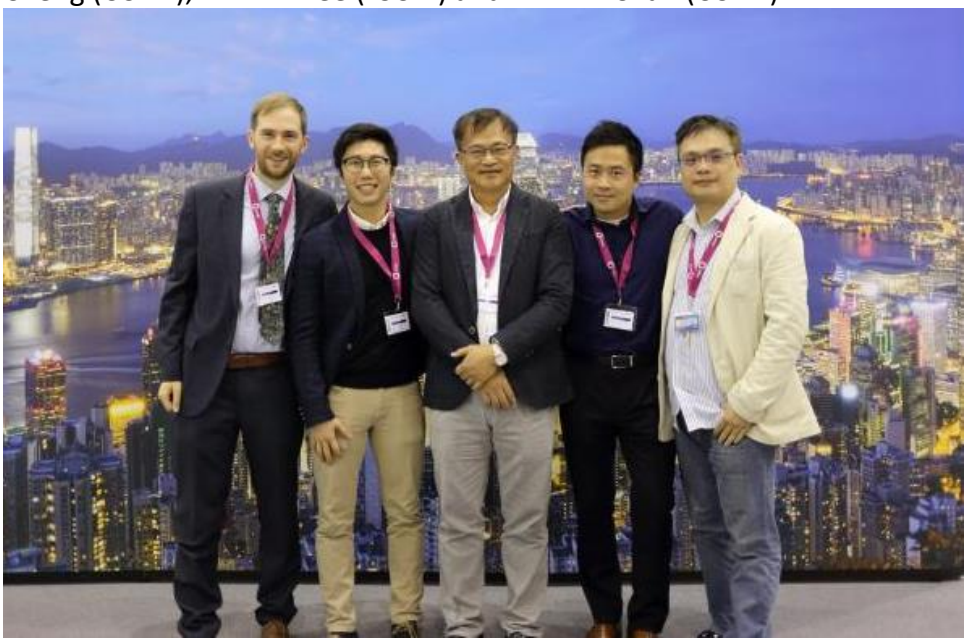
About LSCM R&D Centre

The Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM) was founded in 2006, with funding from the Innovation and Technology Fund of the HKSAR Government, and co-hosted by The University of Hong Kong, the Chinese University of Hong Kong and the Hong Kong University of Science and Technology. It aims to strengthen the local logistics and related industries by providing a one-stop shop for technology transfer and commercialisation, and reinforce the cooperation between the industry and research institutes, to bring about meaningful and significant benefits to the community. For more information, please visit www.lscm.hk.

Photo Captions

Photo 1: LSCM won two Gold medals and two Silver medals with its four submission projects at the 46th International Exhibition of Inventions of Geneva.

Photo 2: LSCM's award-winning team at the 46th International Exhibition of Inventions of Geneva (left to right): Dr Edward Jackson (LSCM), Mr Hugo Mar (HKUST), Prof C. H. Cheng (CUHK), Dr K. K. Lee (LSCM) and Mr Tim Chan (CUHK).



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