COMPUTERWORLD SINGAPORE (/)

NTU’s new research centres to boost Singapore’s interactive digital media industry

Nurdianah Md Nur | Nov. 7, 2013

The new centres have a dual role: to research new technologies, and carry out early test bedding of these research outcomes with NTU’s industry partners.

NTU Provost Prof Freddy Boey presenting a token of appreciation to guest-of-honour NRF CEO Prof Low Teck Seng (http://www3.ntu.edu.sg/CorpComms2/Documents/2013/Photos/NTU%20Provost%20Prof%20Freddy%20Boey%20and%20NRF%20CEO%20Prof%20Low%20Teck%20Seng%20at%20the%20launch%20of%20NTU%20research%20centres%20LILY,%20ROSE%20and%20MAGIC.JPG) at the launch of LILY, ROSE and MAGIC - NTU's three new world-class research centres in interactive digital media.

In an effort to expand its expertise in interactive digital media (IDM), Singapore's Nanyang Technological University (NTU) launched three new research centres yesterday (6 November 2013).

With a total investment of about S$90 million (US$72.5 million), the centres — named LILY, ROSE and MAGIC— were set up with the support of the National Research Foundation (NRF) and Media Development Authority (MDA).

According to NTU Provost, Professor Freddy Boey, the centres will be responsible for "researching new technologies and carrying out early test bedding of these research outcomes with NTU's industry partners". NTU's partners include University of British Columbia, Peking University, Tan Tock Seng Hospital, Pacific Parkinson's Research Centre, HP, NVIDIA, the Lushang Group, and Tencent Holdings Limited.

Professor Boey added that the new centres will also serve as a training ground for future IDM scientists and experts. Over the next five years, about 75 research staff and 74 Masters and PhD students will work with scientists and engineers from industry partners on research projects at these three new centres.

LILY: Designing digital solutions for the elderly

To help address the challenges of an ageing society, The Active Living for the Elderly Research Centre (LILY) will develop cost-effective technologies to assist the elderly to lead an active and independent lifestyle.

LILY will work closely with medical institutions, including Tan Tock Seng Hospital and the Pacific Parkinson's Research Centre, to optimise the impact of its research. The centre is also partnering the Lushang Group — one of China's state-owned enterprise with retail, pharmacy and real estate among its core businesses — to create age-friendly living environments and lifestyles.

Currently, LILY is working on several projects including personal digital assistants for the elderly, and games for the rehabilitation of stroke patients and prevention of Parkinson's disease.

The iPad-based game 'Pumpkin Garden' developed by the Active Living for the Elderly (LILY) research centre at NTU (http://www3.ntu.edu.sg/CorpComms2/Documents/2013/Photos/Pumpkin%20Garden%20app%20by%20LILY%20can%20detect%20Parkinsons%20early.JPG) can facilitate the early detection of Parkinson's disease among seniors.

MAGIC: Powering up the gaming world

Leveraging the rapid growth of the game industry, the new Multi-plAtform Game Innovation Centre (MAGIC) is tasked to translate the latest scientific ideas and made-in-NTU technologies into next-generation technological products and services for gaming. This spans a wide spectrum from Artificial Intelligence for entertainment, and cloud gaming, to 3D technologies for content creation and processing, game design and impact.

To achieve its task, MAGIC will work with industry partners including NVIDIA, HP, GARENA and Nanyang Polytechnic's Games Solution Centre, and research collaborators like Singapore University of Technology and Design.

ROSE: Developing next-generation visual and object search technologies

In response to the growing trend of visual and object searches on the Internet and mobile devices, the Rapid-Rich Object Search (ROSE) Lab at NTU will develop innovative search technologies by leveraging on cloud services. ROSE will do so by working closely with the Peking University in China, as well as industry players including China's Internet service provider Tencent, and sever and cloud solution provider Inspur Group.

According to NTU, ROSE aims to have one of the largest structured object database of around 50 million domain objects in Asia for mobile image search in the next five years.

All three new centres will add to the university's existing cluster of three IDM International Research Centres — the BeingThere Centre, the Centre of Social Media Innovations for Communities (COSMIC) and the Fraunhofer IDM Centre@NTU.