Publication: CIO ASIA
Date: 12 February 2016
Headline: SMU and University of Surrey secure grant for cyber security research

SMU and University of Surrey secure grant for cybersecurity research

Zafirah Salim | Feb. 11, 2016

A team of cybersecurity experts from the Singapore Management University (SMU) and University of Surrey has received a two-year funding from UK's Engineering and Physical Sciences Research Council (EPSRC) and Singapore's National Research Foundation (NRF) to undertake research on Computational Modeling and Automatic Non-intrusive Detection Of Human Behavior-based Insecurity.

This is among the six new joint research projects selected under the inaugural Singapore-UK Joint Grant Call for Cybersecurity Research, which was launched in May 2015, with the objectives of strengthening knowledge and capabilities in cybersecurity, as well as fostering closer collaboration in cybersecurity research between researchers from Singapore and UK.

According to a media statement, the SMU-University of Surrey project aims to prove that human behaviour related insecurities in cyber security can be detected automatically by applying human cognitive models.

The project will apply human understanding and thought process in order to model and simulate humans involved in security systems. This will then support automated detection by developing general-purpose computational framework with supporting software tools. It will also focus on human user authentication systems, and produce new knowledge on the role of human behaviours in such systems and security systems in general.

Software framework and new knowledge of human behaviours can also help address other challenges, such as detection of intruders or extremists which requires knowledge of how they behave. The project will demonstrate the usefulness of the proposed framework. The framework will be applied to selected human user authentication systems to automatically discover or rediscover known and unknown human behaviour related attacks.

Professor Robert Deng, Director of Secure Mobile Centre and Professor for School of Information Systems at SMU; and Dr Shujun Li, Deputy Director of Surrey Centre for Cyber Security (SCCS) at University of Surrey are coordinating partners for this project.

"It has been known that human factors are a very important aspect of cybersecurity. SMU has a strong track record in user authentication systems, while the University of Surrey is a leader in the research of human behavior related insecurity issues," said Professor Deng. "This joint project aims to systematically understand how human factors influence cybersecurity system design in general, and the security properties of user authentication systems in particular."

Besides Prof Deng, Associate Prof Yingjiu Li from SMU School of Information Systems will also be involved in this research project.