THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering

Seminar

UOA: User-Oriented-Addressing for Slice Computing

by

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Time   :   **11:00am – 12:00noon**
Venue   :   **Room 833, Ho Sin Hang Engineering Building**
                  The Chinese University of Hong Kong

Abstract
Sharing computing resources over the Internet has become a popular approach for creating innovative network services. This emerging model of using networked computers is called "slice computing". The term "slice" refers to an intuitive description for the collection of isolated resources. Isolation in namespace, security and performance is the key to preventing interference among users sharing the same slice computing environment. Observing that the network identifier is the most essential resource to be isolated, we try to add a minimal change on top of the OS built-in features to enable network namespace isolation.The idea is assigning network addresses to user identifiers within a native OS. It is different from the traditional Internet addressing architecture where IP addresses are assigned to network interfaces and shared by all users. Accordingly, we call it User-oriented Addressing, or UOA in short. The quantitative evaluations based on our prototype implementation of UOA have identified the challenges of its architecture to a scalable implementation. Case studies illustrate that UOA can be also applied to facilitating innovation in routing architectures.

Biography
Dr. Maoke Chen is an Associate Researcher in Network Research Centre of Tsinghua University and now he's visiting National Institute of Information and Communications Technology (NICT) of Japan as an Expert Researcher. His current research activities are focused on the architecture and system design of slice-based planetary computational environment, including technologies of isolation and resource allocation/scheduling.

Maoke was granted with Ph.D of Information and Communications Engineering by Tsinghua University in July 2004. He also holds Sc.M and Bachelor degrees of the same university.

** ALL ARE WELCOME **

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