

Panel at ACM MobiArch 2009, Krakow, Poland, June 22, 2009

Cloud Computing and Mobility - How Do These Two Fit Together?

Panel Chair/Moderator:

Dr. Xiaoming Fu (Professor of Computer Science, University of Göttingen, Germany)

There is an increasing demand for being always-on with higher capacity for mobile wireless devices, while cloud computing provides a new means for utilizing various virtualized resources for networked devices in the dynamic environments. How does these two fit together? Our fellow panelists are trying to offer their distinct visions and answers to this question.



Panelists:

Dr. Deborah Estrin (Professor of Computer Science, UCLA, USA)

*Emerging Mobile Personal Sensing applications will leverage the power of the cloud to store, analyze, model, compare, share, and protect the personal data streams captured by our mobile devices. I will describe several example **applications that illustrate this symbiosis between mobility and the cloud.***



Dr. Marco Gruteser (Assistant Professor of Electrical and Computer Engineering, WINLAB, Rutgers University, USA)

*Cloud computing trends lead to increasing amount of personal data stored in remote servers rather than user's personal devices. I will discuss the fundamental **implications for data privacy** that this shift has and how future architectures could address these.*



Dr. Stefan Saroiu (Researcher at Networking Research Group, Microsoft Research, USA)

*Cloud computing is here to stay. As cell-phones are increasingly becoming personal sensing devices and as more data is moving to the cloud, the cloud computing space is giving rise to several new research **challenges in privacy and security.** I will describe four such challenges and the dangers they pose to the mobile users' data and computation.*



Dr. Lin Zhong (Assistant Prof. of Elec. & Computer Engineering, Rice U. USA)

*Under the cloud paradigm, networking and I/O, instead of computing, become **ONLY** two irreplaceable functions of mobile devices. This has three implications to the mobile architecture, namely, 1) wireless network interface, in particular its energy efficiency and user-centric quality of services, 2) information acquisition and display devices, such as sensors and displays, and 3) a tighter integration of the network interface and I/O devices, in particular sensors and graphics. To comprehensively address the aforementioned three technical challenges, an endeavor that synergistically examines **hardware, platform, and system** is absolutely necessary.*



Dr. Jacky Shen (Lead Researcher at Wireless and Networking Group, Microsoft Research Asia, China)

*Binding Cloud with mobile is more a fashion than a real need. On the other hand, mobile plus infrastructure is indeed desired to leverage the surrounding computing resources. To cater for the fashion terms, I will describe my vision – **Personal Cloud.***

