
Introduction

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Biographical notes: C.K. Toh is a Honorary Professor with the University of Hong Kong. Earlier, he was a Chair Professor with the University of London and the Director of Research with TRW Tactical Systems Corporation, USA. He authored two pioneering books: *Wireless ATM and Ad Hoc Networks* (Kluwer Academic Press, 1990) and *Ad Hoc Mobile Wireless Networks* (Prentice Hall Engineering Title Best Seller). He received the 2005 IEEE Institution Kiyo Tomiyasu Medal for 'pioneering contributions to communication protocols in ad hoc mobile wireless networks'. He is a fellow of the British Computer Society, Hong Kong Institution of Engineers, IEE, and New Zealand Computer Society.

Xiangyang Xue is currently a Professor in the Department of Computer Science and Engineering at Fudan University. He received his BS, MS and PhD Degrees in the School of Telecommunications Engineering, Xidian University in 1989, 1992 and 1997, respectively. His current research interests include multimedia information processing and retrieval, video streaming, etc.

Network architecture and service models are two key topics of network research and applications. With the rapid development of optical and wireless communications, chips and software, network architectures should be changed to meet the needs of network maintenance and various applications. Many research and technical challenges are being addressed by researchers from both industries and academia.

This special issue is inspired to the NASM'2005 workshop (*the First International Workshop on Network Architecture and Service Models*), which took place in Shanghai in November 2005.

The special issue presents a collection of papers that reflect different research directions in this field. According to the review ratings of all papers in the workshop, we recommended 12 papers to the workshop chair as candidates. After strict review, four papers were accepted, and another one paper was added to the special issue.

All of the papers that we have selected for inclusion in this special issue are extended and revised to reflect the latest research achievements in various areas of network architecture and service models. The topics of the papers cover different aspects ranging from P2P VoD network architecture and service model, MAC for MANET, overlay multicast for MANET and inter-vehicular ad hoc networks.

From the above discussion, we hope that the whole corresponding community including researchers, developers, practitioners and users will find this special issue useful and interesting.

We would like to take this opportunity to thank EIC of the *International Journal of Ad Hoc and Ubiquitous Computing*, Professor Chao, for inviting us to edit this special issue. We congratulate all the authors whose papers have been included in this special issue, and we thank them for agreeing to extend their papers to reflect the latest state-of-the-art in their research areas.