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ACTIVE, PROGRAMMABLE, AND MOBILE CODE NETWORKING

Our Feature Topic on Active, Programmable, and Mobile Networks was scheduled for March 2000. However, prior page commitments for that issue permitted us to only include six of our nine selections. Therefore, in this issue, we have included three articles which are also part of our special issue topic.

The first article in this continuation is an invited paper titled "Secure Quality of Service Handling (SqoSII)." This article outlines the security issues surrounding active networks and provides a description of the Secure Active Network Environment (SANE) which was specifically designed for secure active network processing and was implemented in the SwitchWare architecture. The goal of this effort is safe, secure access, while permitting and supporting user customization of network services.

The next article is "Active Distributed Management for IP Networks," which presents a management architecture, Active Distributed Management (ADM). Both active networks and mobile agents are used in ADM, which provide the properties of distributed execution and programmability.

Our concluding article is "Active Routing for Ad Hoc Networks," which addresses the challenge of integrating mobile wireless devices into a network which approximates the services expectations of a wireline network. Active routing algorithms are needed to provide for efficient data packet routing while maintaining connectivity.

As guest editors, we offer our deepest thanks to all the authors who contributed. Our editorial decisions were difficult, but rewarding. We think that the readers of *IEEE Communications Magazine* will enjoy the results, as presented in the March and April 2000 issues, a total of nine outstanding articles. We greatly appreciate the hard work of our reviewers, and look forward to additional research and publication on this topic.

BIOGRAPHIES

PATRICIA MORREALE [M'83-SM'97] (pat@ati.stevens-tech.edu) received her B.S. from Northwestern University, M.S. from the University of Missouri, and Ph.D. from the Illinois Institute of Technology. Since 1995, she has been with Stevens Institute of Technology, Hoboken, New Jersey. In 1998 she was appointed director of the Advanced Telecommunications Institute (ATI), and she is an associate professor in the Department of Computer Science. Her current research interests include network management and performance, wireless system design, and mobile agents. She is co-editor of

Telecommunications Handbook (1999) and *Advanced Telecommunications Handbook* (2000), both published by IEEE Press, and holds a patent in the area of real-time information processing. She has numerous journal and conference publications. In addition, she is an editorial board member of the *Journal of Multimedia Tools and Applications* (Kluwer Academic).

KAZEM SOHRABY [M '78, SM '85] (sohraby@lucent.com) received his B.S.E.E. with highest distinction from Tehran Polytechnic, Iran, his M.S.E.E. from Worcester Polytechnic, Massachusetts, and his Ph.D. in electrical engineering from Brooklyn Polytechnic Institute, New York. He joined AT&T Bell Laboratories in 1983, and is currently a Distinguished Member of Technical Staff with the Performance Analysis Department of Bell Laboratories, Lucent Technologies, Holmdel, New Jersey. His areas of interest include broadband switching and networking, circuit and packet switching, and wireless communications. He spent part of 1992 with the Mathematics of Networks and Systems Department, Mathematical Sciences Research Center, Bell Laboratories, Murray Hill, New Jersey. He is currently a Senior Technical Editor of *IEEE Communications Magazine*, on the editorial board of *IEEE Network*, and Distinguished Lecturer and a member of the Board of Education of IEEE Communications Society. He served as chair of IEEE INFOCOM '96 and is currently vice chair of the INFOCOM standing committee. He is co-author of a book and over 20 other publications. He has 18 pending and/or granted patents. He was a visiting professor of electrical engineering at City College, City University of New York, and is adjunct faculty at the Stevens Institute of Technology.

BO LI [S'89-M'92-SM'00] (bli@cs.ust.hk) received his B.S. (cum laude) and M.S. degrees in computer science from Tsinghua University, Beijing, China, in 1987 and 1989, respectively, and a Ph.D. degree in computer engineering from the University of Massachusetts at Amherst in 1993. Between 1994 and 1996, he worked on high-performance routers and ATM switches in the IBM Networking System Division, Research Triangle Park, North Carolina. He joined the faculty in the Computer Science Department of the Hong Kong University of Science and Technology in January 1996. His current research interests are wireless mobile networking supporting multimedia, voice and video (H.263, MPEG-2 and MPEG-4) transmission over the Internet, all-optical networks using WDM. He has co-guest edited a special issue of *IEEE Journal of Selected Areas in Communications* on Protocols and Architectures for Next Generation Optical WDM Networks. He has been involved in organizing many conferences such as IEEE INFOCOM, ICDCS, and ICC. He will be International Vice-Chair for INFOCOM 2001.

YI-BING LIN [S'80-M'96-SM'96] (liny@csl.e.nctu.edu.tw) received his B.S.E.E. degree from National Cheng Kung University in 1983, and his Ph.D. degree in computer science from the University of Washington in 1990. From 1990 to 1995 he was with the Applied Research Area at Bell Communications Research, Morristown, New Jersey. In 1995 he was appointed professor in the Department of Computer Science and Information Engineering (CSIE), National Chiao Tung University (NCTU). In 1996 he was appointed deputy director of the Microelectronics and Information Systems Research Center, NCTU. Since 1997 he has been chair, CSIE, NCTU. His current research interests include design and analysis of personal communications services network, mobile computing, distributed simulation, and performance modeling. He was Guest Editor for the *ACM/Baltzer MONET Special Issue on Personal Communications*, and a Guest Editor for the *IEEE Transactions on Computers Special Issue on Mobile Computing*. He received the 1997 Outstanding Research Award from National Science Council, ROC, and the Outstanding Youth Electrical Engineer Award from CIEE, ROC.

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