FOREWORD

Special Section on New Generation Network towards Innovative Future Society

As information communication networks are becoming indispensable social infrastructure, many kinds of requirements and expectations have been arising within this and next decade. Society needs safe, secure, and high-quality information communication infrastructures, service and application platforms which can satisfy various end-users' requirements on demand, sophisticated capability in large scale of terminals and sessions, infrastructure virtualization which can provide transparent and high-level API in various types of communication access media, and so forth. In order to deal with these challenges, further innovations and evolutions from a clean-slate design are strongly required in the future. Actually, research projects launched in NSF FIND/GENI in the United States and FP7 programs in the European Union have stimulated researches concerning those hot issues. Also, in Japan, projects related to the new generation networks have already been started almost at the same time.

Taking this situation into account, this special section was planned to further promote researches and developments of new generation network technologies. A category "position paper" for describing mainly innovative ideas was specially set up in this special section though it is handled and published as regular letter category. We received 57 submissions: 5 position papers, 9 letters, 37 papers, and 6 invited position papers from the US, EU, and Asia. Each submission was carefully reviewed by one guest associate editor and two experts. This special section contains 6 invited and 2 general position papers in the front as LETTERS, followed by 7 full papers and 1 letter. They cover various kinds of important technical contributions; the clean slate architecture, future optical and mobile networking, advanced packet processing, network virtualization, application-layer networking and network science. Moreover, invited position papers enable to understand the state-of-the-art visions, architectures, and theories of the new generation networks.

The editorial committee believes this special section is valuable and fruitful for readers, and encourages further research, development, and deployment activities. On behalf of the editorial committee, I would like to express our sincere appreciation to all the authors for submitting their papers, and reviewers for their great efforts and contributions.

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Masayuki Murata *(Fellow)* received the M.E. and D.E. degrees in Information and Computer Sciences from Osaka University, Japan, in 1984 and 1988, respectively. In April 1984, he joined Tokyo Research Laboratory, IBM Japan, as a Researcher. In September 1987, he moved to Osaka University. In April 1999, he became a Professor of Osaka University, and since April 2004, he has been with the Graduate School of Information Science and Technology, Osaka University. He has contributed more than six hundred papers to international and domestic journals and conferences. His research interests include computer communication network architecture. He is a member of IEEE and ACM.

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