
FOREWORD

Special Section on Network Virtualization and Network Softwarization for Diverse 5G Services

Recently, extensive efforts are being made for providing 5G services in 2020 and beyond, including international research projects, proof-of-concept demonstrations, field trials, standardization and consortium activities, and so forth. Such industry efforts, with complemented by academic insights, have materialized the necessity of network virtualization and softwarization as key concepts and guiding principles. The framework of such 5G infrastructure is being defined in standardization and consortium activities, and technology focus is on how to differentiate its characteristics, such as flexibility, efficiency, scalability and sustainability. It requires such techniques to construct virtual networks on an infrastructure, with the attention of security, placement of functions, scalable operation, restoration capabilities, dynamic network control, scheduling, and radio resource isolation, and so forth.

For this section, 11 high-quality papers were received and 9 papers were accepted. This includes two invited papers, discussing a new paradigm toward autonomous security assurance and latest technologies/standards toward 5G deployment, and 7 papers that address the various characteristics of virtualized infrastructures.

The editorial committee members sincerely appreciate all authors and reviewers for their contributions to this special section. We hope that the published studies will promote further advancement of network virtualization and softwarization.

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Takashi Shimizu (*Member*) is a senior research engineer, supervisor of NTT Network Innovation Laboratories. Shimizu received Dr.E degree in electrical engineering from Tokyo Institute of Technology in 1996, and joined NTT Laboratories. In 2004, he spent a year as a visiting scholar at Stanford University. Since 2011, he had been affiliated with the research laboratory in NTT DOCOMO INC., and had engaged in the research and development for network functions virtualization of mobile systems. In 2014, he returned to NTT Network Innovation Laboratories, and has engaged in the research on advanced wireless systems. He is a member of IEEE, ACM and IEICE.

