



## Preface

# Special Issue on Network Technologies

松本端午

Tango Matsumoto  
Corporate Executive Officer  
EVP, Vice Head of Digital Service Business  
Head of Network Business Group

The Internet has established a foothold in every corner of people's lives as the information and communications infrastructure of modern society. It is now providing large-volume cloud data processing while smart devices and other high-performance terminals replace personal computers as the gateway to information. The world is indeed evolving into an advanced network society. At the same time, the Internet of Things (IoT), which is expected to connect as many as 50 billion devices by 2020, will facilitate mutual interaction between the physical space where people live and the information and communications technology (ICT) space where the massive amounts of data generated by IoT devices are processed. This "cyber-physical system (CPS)" will lead to a world in which knowledge is generated on a scale heretofore unimaginable and new value is created through new personal experiences.

In addition to supporting information processing, advances in artificial intelligence and robotics will directly support human physical activities through various types of robots, autonomous vehicles, drones, and other advanced devices, and such things will become part of our daily lives in the not too distant future.

Network technologies for supporting such a society will require more than the large-capacity communication now in place—high-speed transparent data communication will be required. As the volume of traffic and the number of devices increase at an explosive rate, it will become increasingly important to optimize resource usage and improve response performance and to provide security functions that guarantee the reliability of network services.

Networks too are evolving, from ones comprised of specialized hardware such as servers to ones that implement functions by using software on general-purpose hardware. This new environment will be achieved through software-defined networking (SDN) and network functions virtualization (NFV), which we can expect to accelerate the creation of new services. In addition, the appearance of new services centered about mobile virtual network operators

(MVNOs) should bring about major changes in the network infrastructures and network services currently centered about telecom carriers.

This special issue introduces network system platforms and solutions for providing diverse services, advanced technologies supporting network services, and telecommunications technologies supporting social infrastructures, all revolving about communications-infrastructure technology development nurtured by Fujitsu over many years.

At Fujitsu, we aim to provide our customers with a network infrastructure that can revolutionize business through a process of co-creation, and we intend to contribute to the formation of a prosperous and fulfilling society together with our customers.

I sincerely hope that our readers find the articles in this special issue stimulating and informative.