Preface

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In the world of industry, "digital transformation" is increasingly coming up in conversation. This term, first proposed by Professor Erik Stolterman of Sweden in 2004, was originally used to describe the concept of a society in which the real world and virtual world become increasingly indistinguishable as the digitization of business processes advances. Today, however, digital transformation is increasingly coming to mean the development of new services and business models such as Fintech and Agritech driven by digital technologies. In addition, the rapid migration of computer resources to the cloud and progress in virtualization by software are helping to turn this idea into reality.

In the world of networks, the development of the fifth-generation mobile communications system (5G) is progressing toward a service launch in 2020. It is becoming increasingly clear that 5G will play the role of an information infrastructure that enables maximum use of technologies like AI and IoT.

In the 5G network era, Fujitsu is focusing on the following five business areas. These are the "radio access network" which realizes large-capacity network, low-latency, multi-terminal simultaneous connection, "network slicing" that dynamically allocates a virtual network to each service. Also, these are "edge computing" to achieve high-speed and low-latency load distribution, "network-wide security," and "orchestration" to share network resources and optimize the entire network.

Of importance here is maintaining the relationship between the digital (cyber) world and real (physical) world for people and creating a prosperous and dream-inspiring future from that fusion based on Fujitsu's human-centric ICT vision. On the basis of these values, Fujitsu aims to roll out "connected services" and lead the way to a new world that gives birth to new value.

We can expect the network of the 5G era to evolve from a role of connecting simply A to B, to one of connecting value while overcoming time and space constraints through distributed computing. Fujitsu offers its Virtuora series of software products as a key component supporting this evolving network. Virtuora achieves network virtualization through software-defined networking (SDN) and network functions virtualization (NFV). It is also a framework to achieve virtualization of the entire cloud-based ICT platform and harmonious orchestration desirable to the user. Virtuora is now progressing on equipping with virtual and distributed database technologies such as blockchain.

This issue introduces Fujitsu's approach to next-generation-network architecture and technologies especially to creating new services, development of safe and secure network infrastructure solutions for supporting service operation, and so on.

At Fujitsu, we are committed to providing platform technologies, infrastructures, and services that earn the trust of society through the 5G network. We aim to improve cutting-edge technologies such as AI and robotics so that people can use them in everyday life with peace of mind, and we intend to make an all-out effort to create a prosperous future for everyone.

To our readers, I hope you find this issue interesting and informative and I look forward to your ongoing support and guidance in our endeavors.

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