

Executive Summary

This past July, Japan's ruling party, the Liberal Democratic Party (LDP), announced that it would begin a full review of the case for and against selling off shares in NTT held by the government. Japan's NTT Act currently requires that the government own at least a third of NTT shares, and the LDP is looking to make recommendations on the future status of that Act and on the issue of enhancing the international competitiveness of Japan's telecommunications industry overall as early as this fall.

Japan's Ministry of Internal Affairs and Communications has also asked the Information and Communications Council under its auspices to conduct a study into how telecommunications policy should be structured in response to changes in the market environment, and to report its findings around next summer. The Council set up a special committee on telecommunications policy in response, through which it has put out a broad call for proposals and opinions regarding the vision Japan should pursue for its information and communications infrastructure circa 2030 and the basic policy directions.

Telecommunications used to be a state-owned enterprise in Japan, run by NTT. The privatization of NTT and resulting influx of competition came in 1985. Since then, the environment surrounding information and communications in Japan has seen dramatic change, including with respect to the way in which telecommunications are used, the services and benefits provided, the position and importance of telecommunications in society, and the players that populate the commercial landscape. The Internet has, without a doubt, been an influencing factor in all of this.

NTT naturally continues to be an important player in Japan's information and communications infrastructure, but beyond this, I also look forward to people engaging in high-level discussion and debate ahead about the nature of information and communications not only in Japan but around the world.

The IIR introduces the wide range of technology that IJ researches and develops, comprising periodic observation reports that provide an outline of various data IJ obtains through the daily operation of services, as well as focused research examining specific areas of technology.

The periodic observation report in Chapter 1 is our broadband traffic report for the year, providing our analysis of IJ's fixed broadband and mobile traffic. Although we have observed no notable changes since the COVID-19 pandemic sparked significant traffic growth from 2020, the figures do clearly indicate that traffic volumes and usage by port are steadily changing.

Chapter 2 presents a focused research report that dives into efforts to speed up communications processing on systems software, titled "A Review of Research in Systems Software Communications Since 2010". As the processing power of hardware improves, the efficiency of systems software that controls that hardware, particularly the communications-related processing it performs, is becoming increasingly important. The report starts with an overview of how systems software processes communications data, then surveys past research aimed at making this more efficient, and closes out with a look at IJ Research Laboratory's own efforts in this area.

Our focused research report in Chapter 3 continues our series commemorating IJ's 30-year history. Previous installments covered the IJ backbone and DNS, and here we take a journey through the evolution of IJ's cloud services. Since its founding, IJ has been operating service hosts that provide a whole range of services to accompany its Internet connectivity offerings. And even before terms like "the cloud" and "IaaS" entered the common vernacular, IJ had been providing computing and storage resources as services. The infrastructure that encompasses the servers, storage systems, and networks used by these services has continued to evolve with the times, and our report here goes over the changes that have occurred.

Through activities such as these, IJ strives to improve and develop its services on a daily basis while maintaining the stability of the Internet. We will continue to provide a variety of services and solutions that our customers can take full advantage of as infrastructure for their corporate activities.



Junichi Shimagami

Mr. Shimagami is a Senior Executive Officer and the CTO of IJ. His interest in the Internet led to him joining IJ in September 1996. After engaging in the design and construction of the A-Bone Asia region network spearheaded by IJ, as well as IJ's backbone network, he was put in charge of IJ network services. Since 2015, he has been responsible for network, cloud, and security technology across the board as CTO. In April 2017, he became chairman of the Telecom Services Association of Japan's MVNO Council, stepping down from that post in May 2023. In June 2021, he also became a vice-chairman of the association.