

Executive Summary

By the end of 2010 the number of Internet users around the world had reached two billion. The population of the world is about seven billion, so this represents a penetration rate of about 30%, meaning around one in every three people use the Internet. By contrast there are now said to be over five billion mobile phones in use, so it seems likely that the number of Internet users will also continue to rise.

With the number of users growing, in April of this year the registry pool of unallocated IPv4 addresses in Japan was exhausted. Examining this on a macro level, with roughly 4.3 billion IPv4 addresses available we are now reaching the limit of capacity for an effective user base of 2 billion, and it has become necessary to upgrade to the next phase of infrastructure technology, namely IPv6, in order to prepare for an even larger number of users in the future.

Looking at the services on this infrastructure, social media services for example, Facebook, as a single company, has more than 700 million users. There are a number of other media service operators around the world with users numbering in the hundreds of millions. Media providers like these and the ISPs that provide access to them are now expected to provide services on a whole different level of scale and quality than in the past with regard to the management of user personal information and the handling of content circulated. Beyond a mere technological upgrade, it may be that the Internet needs to move to the next level in the areas of information morality and social norms as well.

This report discusses the results of the various ongoing surveys and analysis activities that IJ carries out to maintain and develop the Internet infrastructure and enable our customers to continue to use it safely and securely. We also regularly present summaries of technological development as well as important technical information.

In the "Infrastructure Security" section, we report on the results of our ongoing statistics gathering and analyses for security incidents observed during the three months from April 1 to June 30, 2011. We also present our focused research for this period, including analysis of the attacks targeting companies and government organizations that have been intensively occurring since the end of last year, and discussion of the "Guidelines for Dealing with High Volume Communications and Privacy at Telecommunications Carriers (Second Edition)" created by the Council for the Stable Operation of the Internet (second stage).

In the "Messaging Technology" section, we examine spam ratio trends and regional source distribution, as well as trends in the main regional sources of spam, for 13 weeks between April and early July, 2011. We also discuss SPF and DKIM authentication result ratios, and look at the adoption rate of sender authentication technology.

In the "Broadband Traffic Report" section, the impact of the Great East Japan Earthquake on broadband traffic in Japan is analyzed on a macro level. We also examine shifts in traffic trends since 2010 by comparing traffic and port usage levels for the week starting May 30 2011 with those for the same period last year.

Under "Internet Topics," we give an account of the background and developments to date in the blocking of child pornography that started at a number of ISPs and other organizations in Japan from April 2011, and examine the implementation methods and issues to be resolved.

Through activities such as these, IJ continues to strive towards improving and developing our services on a daily basis while maintaining the stability of the Internet. We will keep providing a variety of solutions that our customers can take full advantage of as infrastructure for their corporate activities.

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President and CEO, IJ Innovation Institute Inc. Mr. Asaba joined IJ in its inaugural year of 1992, becoming involved in backbone construction, route control, and interconnectivity with domestic and foreign ISPs. He was named IJ director in 1999, and as executive vice president in charge of technical development in 2004. Mr. Asaba founded the IJ Innovation Institute Inc. in June 2008, and became president and CEO of that organization.