TRANSITION FROM IPv4 TO IPv6 IN MONGOLIA: KEY ISSUES AND RECOMMENDATIONS

Thursday, 9 March 2017 15:00 (30 minutes)

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Summary

The steady growth of broadband and mobile networks, leading to universal network access, requires an adequate supply of IP addresses. "Transition from IPv4 to IPv6" is a top issue for the Governments, regulators, the internet community and users. While the field of IPv6 transition technology is still evolving, operators need to carefully consider which mechanism is most suitable to their networks. Broadband and mobile network deployment planning checklists must include IPv6 readiness at the service provider level. Governments and Regulators also need to make sure their e-services support IPv6 for equal accessibility across their population. The objective of this paper is to introduce and share the current ICT sector developments, policy objectives and regulatory frameworks on implementation of the National Broadband Program and IPv6 deployment initiatives, Mongolia-IPv6 survey results, some achievement and key challenges in Mongolia compared with global trends. In its National Broadband program, Communications and Information Technology Authority (CITA, former ITPTA) set out 7 strategic objectives for the next midterm period (2015-2018). To implement the strategic objectives, IP network growth and scalability is critical. It is, therefore, necessary that Mongolia facilitates a timely transition from IPv4 to IPv6. The need for IP addresses would escalate as the country rolls out 4G-LTE, IPTV, broadband wireless access and Internet of Things (IoT) devices.

Developing countries like Mongolia recognize the need to harness ICT applications for E-Government and public service delivery. Policy and regulatory environment is one of the most critical factors affecting the development of ICT infrastructure development including transition from IPv4 to IPv6, basis for e-applications, e-sciences and research. Emphasis is needed from policy makers and regulators with the cooperation from all other stakeholders in improving of utilization the state owned fiber optic backbone network (more than 36.5 thous.km long) and its transition to IPv6 based network. Technological options are available for new installations as well as for upgrading existing networks.

The paper attempts to define key challenges Mongolia is now facing for example legal frameworks, policy and regulatory issues on IPv6 deployment and key challenges including all stakeholders, HRD and capacity building activities, data and network security issues.

Mongolia is currently examining to institute a framework, roadmap and task force on IPv6 deployment in keeping with approaches in other countries. The policy maker (CITA) and the regulator (CRC) have set up a joint working group-IPv6 to assess the status of IPv6 readiness and to prepare draft paper on IPv6 transition strategy in Mongolia.

Finally, paper proposed the way to forward-set of recommendations on Roadmap and IPv6 deployment at national level, recommendation for telecom industry and business, economics of transition to IPv6, ssecurity policy in IPv4 to IPv6 migration for the Government organizations, all level of networks and stakeholders for starting transition from IPv4 to IPv6 in Mongolia.

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Session Classification: Network, Security, Infrastructure & Operations III

Track Classification: Networking, Security, Infrastructure & Operations