



30 January 2013

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**Re: Comments on the fourth draft report of the ITU Secretary-General on the 2013 World Telecommunication Policy Forum (WTPF)**

Over the past nine months, the Internet Society has actively participated in the Informal Experts Group set up by the ITU Secretary General in order to prepare for the World Telecommunication Policy Forum (WTPF). As a Sector Member of the ITU Telecommunication Standards and Telecommunication Development Sectors, the Internet Society has engaged in this process in the hopes of contributing to a positive and constructive WTPF in May 2013. It has been our view that the WTPF should be an opportunity for constructive dialogue and that the WTPF could make a positive contribution to the multistakeholder model of Internet governance as it relates to this years WTPF theme, International Internet-related public policy matters.

At the outset of the process, the Internet Society, along with other ITU Members, offered suggestions for themes for the WTPF. Our suggested theme, "Strategies for increasing affordable global connectivity: the critical role of IXPs" was intended to provide a foundation for the discussion and also to build upon the important work already underway within the ITU and elsewhere to expand connectivity worldwide. We note that other stakeholders made similar contributions with respect to overarching themes for the WTPF. To our understanding, these suggestions were made in the hopes that the WTPF would *move the discussion forward* and be a tool for real progress in these areas.

Unfortunately, as we read the latest version of the draft Secretary-General's report, we still do not believe that the Report expands on many of these important issues. Instead, the Report returns to debates that have been addressed time and again thru the WSIS, the WGIG, the IGF, and even a number of ITU coordinated Broadband Commission meetings.

We are further discouraged by the tone of the current draft report and its focus on divergence of views rather than collaboration, information and consensus. Indeed, the growth and innovation of the Internet combined with the policy consensus on multistakeholder Internet governance (WSIS) points to a robust *consensus* that needs to be built upon and supported. While there are always opportunities for more participation and improvement, these are positive opportunities and should not be viewed as points of division.

Thus, we take this opportunity to once again encourage the ITU to approach the WTPF as an opportunity to look forward and to expand upon themes like global connectivity, enabling environments to support growth and interoperability, ICTs and development, and/or multistakeholder cooperation and collaboration. From the perspective of the Internet Society, we sincerely believe that these topics would benefit from more dialogue and, ultimately, more action at the local and national levels. In fact, the work of the ITU-D provides an excellent set of building blocks for an impactful and strategic policy discussion that could help inform ITU Members on policy tools to enhance Internet access at the national level.

In the comments that follow, the Internet Society highlights some specific areas where we believe changes and clarifications are needed to the text of the fourth draft of the Report. In making these specific suggestions, however, we do not wish to lose sight of our overall concern about the direction and tone of the complete report. The Internet Society also respectfully submits a draft WTPF Opinion entitled, "To foster an enabling environment for the greater growth of high-speed broadband connectivity". We believe that this draft Opinion is in the full spirit of the WTPF and offers an important vision for the policy and technology steps needed to promote greater connectivity.

Once again, we appreciate the work of the ITU on this latest draft Secretary-General's Report and for the opportunity to contribute. We submit these comments in the hopes of moving the discussion forward in a positive and constructive fashion.

Sincerely,

Constance Bommelaer  
Director, Public Policy  
The Internet Society

## **ISOC's specific Comments on the Secretary-General's Report**

**Section 2.3.2.3 iii):** While the ITU is, indeed, comprised of Member States and Sector Members, it is important to note the significant limitations on the participation of non-Member States in the decision making process of the ITU and in some of the key activities of the ITU (note, in particular, the ITU Council Working Group on Internet Related Public Policy which is restricted to Member States only).

**Section 2.3.3 a:** The discussion about IXPs in this section would be enhanced by recognition of two key factors: first, IXPs, such as in Kenya and Nigeria, are local rather than national. We are concerned that use of the word "national" suggests that these are government run entities, which would not be an accurate interpretation. Second, this section could be enhanced by more information about the need for multistakeholder support for an IXP to be successful - the planning, implementation and operation of an IXP requires the support, encouragement, and full engagement of a variety of stakeholders.

**Section 2.3.3 (g-l):** The discussion regarding QoS in Section 2.3.3 (g-l) suggests that the Internet architecture and traffic flows are architected like the circuit switched telecommunications networks. In our view, proposals to overlay circuit switched terminology, architectural and traffic flow standards/parameters on the Internet would fundamentally change the nature of interconnection and transport and ultimately increase the cost of traffic termination. Further, there are currently no technical barriers that prevent ISPs from deploying Quality of Service (QoS) enabled services *within* their networks. The barriers to deploying such services globally, *between* networks, are both technical and commercial. The Internet Society analyzed this issue in more detail in 2012 in a paper<sup>1</sup> entitled "Internet Interconnections Proposals For New Interconnection Model Comes Up Short".

**Section 2.3.3 k):** OTT or "over-the-top" is a term of art used within the communications industry that has come about as a result of the introduction of competition, and refers to the delivery of content and services over an infrastructure that is not under the same administrative control as the content or network provider. OTT therefore applies to any network where services or content is provided beyond the boundary of the provider, not just to IP networks but also to any infrastructure.

**2.3.3.2 d)** There is much discussion in the draft Report on the process required to support migration from IPv4 to IPv6. It should be noted that there are many IPv4 to IPv6 transition mechanisms that have been identified by the technical community. The Internet Society would like to point to several informational documents that have been created by the Internet Engineering Task Force (IETF) that address IP address migration options.

RFC 6589 on "Transitioning Content to IPv6" that provides specific guidance for transitioning from IPv4 to IPv6. This document describes considerations for the transition of end-user content on the Internet to IPv6. While this is tailored to address end-user content, which is typically web-based, many aspects of this document may be more broadly applicable to the transition to IPv6 of other applications and services. This document explores the challenges involved in the transition to IPv6, potential migration tactics, possible migration phases, and other considerations.

RFC 6180 on "Guidelines for Using IPv6 Transition Mechanisms during IPv6 Deployment". This document describes how the Internet continues to grow beyond the capabilities of IPv4. An expansion in the address space is clearly required. With its increase in the number of available prefixes and addresses in a subnet, and improvements in address management, IPv6 is the only real option on the table. Yet, IPv6 deployment requires some effort, resources, and expertise. The availability of many different deployment models is one reason why expertise is required. This document discusses the IPv6 deployment models and migration tools, and it recommends ones that have been found to work well in operational networks in many common situations.

**2.3.4 (b)** provides an estimate of 5,000 for the number of networks interconnected to form the Internet, however that number does not reflect the current status of interconnected networks that comprise the Internet's network of networks.

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<sup>1</sup> <http://www.internetsociety.org/internet-interconnections-proposals-new-interconnection-model-comes-short>

The current report on the number of "Autonomous Systems (AS)" numbers that are being advertised in the Internet's routing tables is closer to 42,000 interconnected networks that comprise the Internet. (This information can be located at either of these sources: <http://www.potaroo.net/tools/asn32/> or <http://www.cidr-report.org/as2.0/> )

**2.3.4.3 (b)** - The Internet Society would like to note that there is a mechanism under development by the technical community on top of DNSSEC to ensure that users can truly trust in the Internet certificate ecosystem through tying certificates to the DNSSEC chain of "trust". The IETF is working on RFC 6698 on "The DNS-Based Authentication of Named Entities (DANE) Transport Layer Security (TLS) Protocol: TLSA". Currently this draft is under development. The document describes how the encrypted communication on the Internet often uses Transport Layer Security (TLS), which depends on third parties to certify the keys used. This document improves on that situation by enabling the administrators of domain names to specify the keys used in that domain's TLS servers. This requires matching improvements in TLS client software, but no change in TLS server software.