United States Department of State
Washington, D.C. 20520

1 August 2012

Dr. Hamadoun I. Touré
Secretary-General
International Telecommunication Union
Place des Nations
CH-1211 Geneva 20
Switzerland

Ref: Second Draft of the Secretary-General's Report for the Fifth World Telecommunication/Information and Communication Technologies Policy Forum 2013

Dear Dr. Touré:

The United States of America welcomes the opportunity to comment on the "Second Draft of the Secretary-General's Report for the Fifth World Telecommunication/Information and Communication Technologies Policy Forum 2013". This Report is an essential element for drafting Opinions that reflect a common vision on international Internet-related public policy matters. The successful outcome of WTPF 2013 hinges on a comprehensive Report that is ***balanced, technically accurate, reflective of Member State and Sector Member input, and in line with Resolutions 2, 101, 102, 133 (Guadalajara 2010), and Council Decisions 562 and 572***.

The United States comments also include those from the U.S. multi-stakeholder community, as attached to in the Annex of this contribution.

Further, to progress the work toward the Third and Fourth Draft of this Report, additional research, input from Member States and relevant organizations, and a reorganization of the text are recommended. Input made into the Second Draft (Revision 1, posted on 13 July 2012) by Member States, the Internet Society, ARIN, and Cisco have substantially improved the text. However, the four important criteria — balance, technical accuracy, reflective of Member State and Sector Member input, and adherent to relevant Resolutions — have not been fully met across several sections of the Report, and are described below with newly proposed or amended text.

Balanced. Policy issues should be presented with a full range of facts or perspectives. Section 2.3.3, *Internet Protocol (IP)-Based Networks and Management of Internet Resource*, for example, leads the reader toward flawed and misleading conclusions. Regarding Figure 2,

which illustrates trends in IP-traffic, pricing, and revenues, the author posts that the growth in traffic "require[es] corresponding significant growth in investment in telecommunication infrastructure", and moreover, that this situation "poses a significant challenge the future [*sic*] of the telecommunication/ICT and Internet services industry going forward."

Such a claim does not present a balanced or complete perspective on this issue as it ignores cost figures. A complete graphical depiction would include a trend line for costs, which would show that, over this time period, unit cost for equipment that provide Internet service has decreased faster than the increase in traffic per user. This has occurred while revenues, as illustrated, have risen steadily. Moreover, even though the absolute volume of traffic is increasing, the percentage rate of growth has decreased. The result of these trends is an important factor in this sector to make necessary infrastructure investments. More importantly, the author portrays the precipitous fall of consumer prices since 1995 as a challenge to the marketplace. Falling prices are a natural phenomenon in a market where unit costs are falling faster than the growth in consumption. The pricing trend represents a growth in consumer demand and in local competition – both should be applauded.

Technically accurate. Section 2.3.3.2 (a-g), which deals with Internet Naming and Addressing, is an example where the information provided is not technically accurate. A prior version of this Second Draft stated that "networks using IPv6 are totally separate and distinct from networks using IPv4"; whereas both protocols can and do exist on the same network equipment. It further states that "IPv6 implementation is progressing slowly", when in reality worldwide implementation of IPv6 has grown significantly (http://bgp.potaroo.net/v6/as2.0/). Another misrepresentation suggests that "Internet Service Providers (ISPs) using IPv6 still need to use IPv4 in order to be able to access most of the existing content". Almost every big commercial content delivery network enabled their CDNs for IPv6 prior to 6 June 2012 (World IPv6 Launch Day), as did large services such as Facebook and Netflix. It is incumbent upon the ITU to solicit the input of the private sector, technical community, and civil society in order to provide a technically accurate and up-to-date information to the reader and WTPF-2013 participant.

Reflective of Member State and Sector Member contributions. The Second Draft Report includes policy positions that are attributed to various unnamed parties. The use of such terms as "some observers" or "some stakeholders", without attribution, forms the basis of the discussion in section 2.3.4, *International public policy issues and the management of Internet resources*. In this discussion, references are made to ICANN's program for expanding the number of generic Top Level Domains (gTLDs). Of the ten original contributions from ITU Member States and Sector Members, not a single contribution expressed concern about the gTLD program. The ITU should identify the concerned parties if issues are raised in the Report.

Similarly, text appears to be missing with respect to the original contributions from some Member States and Sector Members. The Internet Society, for example, suggested that Internet Exchange Points (IXPs) should be a major focus of the WTPF, and submitted a comprehensive study on the role that IXPs have played on access, connectivity, and quality of service. The draft Report covers these policy issues, but ignores the crucial role of IXPs.

Resolutions 101, 102, 133. These resolutions contain a footnote calling for the ITU to explore ways and means for greater collaboration and coordination between ITU and relevant organizations, "including, but not limited to, the Internet Corporation for Assigned Names and Numbers (ICANN), the regional Internet registries (RIRs), the Internet Engineering Task Force (IETF), the Internet Society (ISOC) and the World Wide Web Consortium (W3C), on the basis of reciprocity."

Considering the volume of text in this report that deals with ICANN's area of expertise, we request that the ITU implement the "*resolves*" of these Resolutions. ICANN's direct input and contribution would accurately address the organization's modalities and its role in managing the Internet's domain name system.

Lastly, the Report would be better served if it is limited to the ITU's mandate. The Second Draft contains references to issues such as Intellectual Property protection and the role of the Government Advisory Committee (GAC) that are outside the ITU's remit. In Section 2.3.6, the Second Draft minimizes the scope and range of the GAC advice on public policy aspects of matters under consideration within ICANN that have already been taken into account, and are reflected in the final policy decisions by the ICANN Board.

Broad outlines for possible Draft Opinions. As the request for comments on the Second Draft also solicited broad outlines for possible Draft Opinions, the United States reaffirms its theme on the "Development & Diffusion of Information and Communication Technologies Globally", and looks forward in developing an associated Draft Opinion in conjunction with the Third Draft of the Secretary-General's Report.

The United States notes that the Second Draft of the Secretary-General's Report is an improvement over earlier versions. The Second Draft has also taken into consideration constructive input and contributions made during the first meeting of the group of experts. Much work remains however to progress the text collectively toward the Third and Fourth Draft.

We very much look forward to our upcoming review of, and comments on the Third Draft in preparation for the second meeting of the group of experts in October 2012.

I remain,

Sincerely yours,

Richard C. Beaird
Senior Deputy U.S. Coordinator for International
Communications and Information Policy

ANNEX

Contributions from the U.S. multi-stakeholder community

Comments by CNRI on the Second Draft of the ITU WTPF Report (Received on July 27, 2012):

1. The list in Box 1 of Section 2.3.1(a) on key stages of Internet development is both unfairly short and also misleading. There were many other contributions of importance and at least some of these should be listed. It is suggested that: (i) Box 1 be deleted, (ii) the following text be inserted before the current item (b), and (iii) current items (b) – (j) be re-lettered accordingly.

"b) Various technologies underpin the Internet such as computing, digital communications and semiconductors that were realized in the 1940s and 1950s. In the 1960s, two specific contributions propelled computer networking forward, namely, time-sharing (which enabled interactive computing) and packet networking (which enabled efficient transport and switching of short, bursty computer data). The first packet network was the ARPANET, whose first node was deployed in 1969, but was soon followed in the 1970s by a series of other packet networks, including EPSS in the United Kingdom, Cyclades in France, Ethernet and Packet Radio in the United States, and Packet Satellite that linked researchers in the United States and Europe over Intelsat IV.

c) In 1973, the proposal for what became known as TCP/IP was presented at a conference at the University of Sussex and was experimentally deployed a few years later to link several of the networks mentioned above. Thus was born the set of interconnected networks, computers and their applications known as the Internet. In 1980, TCP/IP was adopted as a protocol standard; and in 1983, the transition to TCP/IP occurred for computers on the ARPANET.

d) Low cost personal computers emerged at about the same time. Soon thereafter, they had enough computing power available to support TCP/IP, and the number of computers using the Internet protocols increased dramatically. In 1980, many different approaches were still being used in a variety of proprietary and public systems, but by the mid 1980s, a convergence to TCP/IP had occurred so that interoperability among the various networks and their associated computer systems was then enabled.

e) In 1983, the Domain Name System (DNS) was introduced in order to allow the use of semantic names for host computers. The DNS allowed semantic host names to be resolved to IP addresses thus simplifying use of the Internet.

f) The U.S. National Science Foundation became an important supporter of computer networking in the research community both in the U.S. and internationally; and a high-speed packet network called NSFNET was introduced. Research networks were developed along with commercial networks in many other countries around that time. A number of international

connections were deployed in the internet by the end on the 1980s; and initial efforts to allow interconnections between the research networks and the commercial networks took place.

g) In the 1990s, the ARPANET was decommissioned due to the success of other higher speed alternatives, such as NSFNET, and certain restrictions on the use of government supported networks such as the NSFNET were relaxed. The World Wide Web was introduced and made easy to use by a point-and-click interface developed at the University of Illinois, known as a browser. In 1996, when the NSFNET was shut down, the Internet had already become a widely deployed global information system.

2. Following the last item in Section 2.3.1, which is currently 2.3.1(j) prior to re-lettering, I suggest adding a new item as follows:

"The management of information in digital form has emerged in recent years as an important aspect of the Internet going forward. This will benefit many new efforts such as those involving Cloud Computing, Big Data and the Internet of Things; and new architectures, such as the Digital Object Architecture, are being developed and deployed that support these initiatives."

3. It would be better to replace footnote number one in Section 2.3.1 (which reflects a relatively informal and incomplete historical snapshot) by a footnote that references an article written by many of the original pioneers of the computer networking field. The article entitled *Brief History of the Internet*, by Barry M. Leiner, Vinton G. Cerf, David D. Clark, Robert E. Kahn, Leonard Kleinrock, Daniel C. Lynch, Jon Postel, Larry G. Roberts, and Stephen Wolff, is available at http://www.internetsociety.org/internet/internet-51/history-internet/brief-history-internet/.

4. Section 2.3.3(b) refers to the "Internet, and IP-networks more broadly." This terminology is troubling. The definition of the Internet, which was prepared by many persons intimately involved in the establishment of the Internet, is available at http://www.nitrd.gov/fnc/Internet_res.html. It refers to the Internet as a global information system (rather than a network in itself) that assumes the use of IP addresses and their logical extensions and follow-ons. In this context, every network that uses IP-addresses would be a logical part of the Internet even though it may be temporarily or permanently disconnected. Even if the order were interchanged and one referred to IP-networks and the Internet more broadly, it would still require one to define what an IP network is and how it differs from other networks that comprise elements of the Internet.

5. In section 2.3.3.2 (c) on Internet Naming and Addressing, the reference to 340 Trillion seems wrong. The right number would be slightly above 340 followed by 36 zeroes which, in any event, is very much larger than a Trillion.

6. Section 2.3.4.1 (b) on new gTLDs, should start as follows:

"Originally there was one gTLD called .arpa. Subsequently, seven more gTLDs were added (.com, .org, .net, .gov, .edu, .mil and .int). "

Then it can continue as before with "Following growth ..."
