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Information Document

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The International Corporation for Assigned Names and Numbers (ICANN) thanks the Secretary-General of the International Telecommunication Union (ITU) for the opportunity to provide some overall views and some specific edits to the Opinions for the Fifth World Telecommunication/ICT Policy Forum (WTPF).

We welcome the open nature of the preparatory phase for the WTPF and the diverse range of actors we are hoping will attend in Geneva next month.

Like other organisations involved in the multi-stakeholder approach to the governance on the Internet (such as ISOC) we hope the WTPF will have the opportunity to discuss the innovative and creative forces enhanced through a public policy process that involves all the actors with a locus on Internet governance including governments, business, technical and civil society and users. We also hope the Conference t will focus on those issues that will directly benefit those in our society that currently do not experience the form of Internet access and thus experiences that we are privileged to have.

While we were fortunate to have been involved in the process that brought forward the six draft Opinions we fully appreciate that there will be other views and considerations that it may be appropriate to take into account. For our part we have suggested in the attached annexes some slight additions to the language used in the Opinions pertaining to IPv4 and IPvV6 addresses. This additional wording, in the *considering* and *recognizing* sections seeks to recognise the role of ICANN, among other actors, in terms of the policies concerning the distribution of IP addresses.

ANNEX 1

**DRAFT OPINION: Supporting Capacity Building for the deployment of IPv6**

The fifth World Telecommunication/ICT Policy Forum (Geneva, 2013),

 *considering*

a) the success of WTSA Resolution 64 (Rev. Dubai 2012) on the subject of IP address allocation and encouraging the deployment of IPv6 which, *inter alia*, instructed the Director of the TSB in close collaboration with the Director of the BDT to undertake tasks;

b) Plenipotentiary Resolution 180 (Guadalajara 2010) on Facilitating the transition from IPv4 to IPv6;

c) the work of the IPv6 working group, that was established by the Council at its 2009 session and relevant discussions in WTSA-12 Dubai;

d) WTPF Opinion 5 (Lisbon, 2009) calling for acceleration of activities related to WTSA Resolution 64;

e) the work of BDT and TSB already undertaken on the subject of IPv6;

f) that IPv6 address allocation and deployment is an important issue for Member States and Sector Members;

g) the ongoing work of the RIRs, ISOC, ICANN, and other stakeholders in the areas of IPv4, IPv6 in relevant capacity building,

 *recognizing*

a) that ICANN has allocated the last IPv4 blocks to the RIRs;

b) that RIRs have put in place measures to manage the remaining IPv4 blocks;

c) that migration to IPv6 is gaining speed and that many prominent international web-based businesses have already implemented IPv6 portals;

d) that IPv6 extremely large address space enables global connectivity to many more electronic devices, mobile phones, laptops, in-vehicle computers, televisions, cameras, building sensors, medical devices, etc;

e) that IPv6’s security, when enabled and configured with the appropriate key infrastructure, in form of IPsec, will enhance authentication, encryption, and integrity protection at the network layer;

f) that, nevertheless, the proportion of IPv6 traffic on the Internet remains very small;

g) that, because of the opportunity to operate IPv4 and IPv6 in parallel, via either dual stack or tunneling operation, there will be a need for IPv4 addresses for an indeterminate period until a critical mass of web-based services is available via IPv6 addresses;

h) that new entrant Internet service providers will continue to require access to IPv4 addresses for an indeterminate time;

i) that the RIRs have developed special policies for the distribution of final blocks of IPv4 addresses aimed to ensure that new and emerging networks receive a small amount of IPv4 for the foreseeable future;

j) that some RIRs are seeking to reclaim the IPv4 address space that was allocated in large blocks to individual companies and organizations prior to the establishment of the RIRs;

k) that a growing market has developed in the transfer of IPv4 addresses between entities and that the overwhelming proportion of transferred addresses are from legacy allocations which are not subject to the policies of the RIRs;

l) that the Directors of the TSB and BDT have

1) initiated a project to assist developing countries, responding to their regional needs as identified by the Telecommunication Development Bureau (BDT); this project should be carried out jointly by the Telecommunication Standardization Bureau (TSB) and BDT, taking into consideration the involvement of those partners willing to join and to bring their expertise;

2) established a website that provides information about global activities related to IPv6, to facilitate awareness-raising and the importance of IPv6 deployment for all ITU members and interested entities, and provides information related to training events being undertaken by relevant entities in the Internet community (e.g. Regional Internet Registries (RIRs), Local Internet Registries (LIRs), operator groups, the Internet Society (ISOC));

3) promoted awareness of the importance of IPv6 deployment, to facilitate joint training activities involving appropriate experts from the relevant entities, and to provide information to developing countries;

4) studied IPv6 address allocation and registration and reported to ITU Council 2012.

 *recognizing further*

a) that the RIRs are developing policies to manage the inter-regional transfer of address space, underpinned by needs based demand for IPv4 addresses;

b) that needs-based address allocation should continue to underpin IP address allocation, irrespective of whether they are IPv6 or IPv4, and in the case of IPv4, irrespective of whether they are legacy or allocated address space;

c) that all IPv4 transactions be reported to the relevant RIRs, including transactions of legacy addresses that are not necessarily subject to the policies of the RIRs regarding transfers, as supported by the policies developed by the RIR communities;

d) that issues regarding IPv4 can be minimized by accelerating the transition to IPv6,

 *is of the view*

a) that every effort should be made to encourage and facilitate the transition to IPv6;

b) that policies of inter-RIR transfer across all RIRs should ensure that such transfers are needs based and be common to all RIRs irrespective of the address space concerned;

c) that Member states and Sector members should promote the availability of affordable Customer Premise Equipment (CPEs) compatible with IPv6 in the shortest time possible,

 *invites*

a) Member States to consider policies and incentives to promote, facilitate and support the fastest possible adoption and migration to IPv6 within their jurisdictions;

b) Sector Members with web and Internet business to offer their services via IPv6 as quickly as possible.

ANNEX 2

**DRAFT OPINION: IN SUPPORT OF IPv6 ADOPTION AND TRANSITION FROM IPv4**

The fifth World Telecommunication/ICT Policy Forum (Geneva, 2013),

 *considering*

a) WTSA Resolution 64 (Rev. Dubai, 2012) on the subject of IP address allocation and facilitating the transition to and deployment of IPv6 which, *inter alia*, instructs the Director of the TSB in close collaboration with the Director of the BDT to:

1) continue the ongoing activities between the Telecommunication Standardization Bureau (TSB) and the Telecommunication Development Bureau (BDT), taking into consideration the involvement of those partners willing to participate and bring their expertise to assist developing countries with IPv6 migration and deployment, and to respond to their regional needs as identified by the BDT, especially through capacity building programs;

2) maintain the website which provides information about global activities related to IPv6, to facilitate awareness-raising and the importance of IPv6 deployment for all ITU members and interested entities, and provides information related to training events being undertaken by ITU and relevant entities in the Internet community (e.g. Regional Internet Registries (RIRs), ICANN, network operator groups, and the Internet Society (ISOC));

3) promote awareness of the importance of IPv6 deployment, to facilitate joint training activities involving appropriate experts from the relevant entities, and to provide information including roadmaps, guidelines, and to assist in the establishment of IPv6 Test bed Laboratories in developing countries in collaboration with appropriate related organizations;

4) take appropriate action to facilitate the activities for Study Group 2 and Study Group 3 in the area of IP addresses and to report annually to the ITU Council and to WTSA 2016.

b) Plenipotentiary Resolution 180 (Guadalajara, 2010) on Facilitating the transition from IPv4 to IPv6;

c) the work of the IPv6 working group, that was established by the Council at its 2009 session, as well as related discussions in WTSA-12 (Dubai 2012);

d) WTPF Opinion 5 (Lisbon, 2009) calling for acceleration of activities related to WTSA Resolution 64 (Johannesburg 2008);

e) the work of BDT and TSB already undertaken on the subject of IPv6;

f) that IPv6 address allocation and deployment is an important issue for Member States and Sector Members;

g) the ongoing work of the RIRs, ISOC, ICANN, and other stakeholders in the areas of IPv4 and IPv6,

 *recognizing*

a) that ICANN has allocated the last IPv4 blocks to the RIRs;

b) that RIRs are close to exhausting their IPv4 allocations;

c) that migration to IPv6 is gaining speed and that many prominent international web-based businesses have already implemented IPv6 portals;

d) that IPv6’s extremely large address space enables global connectivity to many more electronic devices, mobile phones, laptops, in-vehicle computers, televisions, cameras, building sensors, medical devices, etc;

e) that IPv6’s security, when enabled and configured with the appropriate key infrastructure, such as IPsec, will enhance authentication, encryption, confidentiality and integrity protection at the network layer;

f) that the proportion of IPv6 traffic on the Internet remains very small;

g) that because of incompatibility between IPv4 and IPv6, parallel (dual stack) operation is required and there will be a need for IPv4 addresses for an undetermined period until a critical mass of users and services is available via IPv6 addresses, thereby allowing IPv4 to be phased out;

h) that new entrant Internet service providers will continue to require access to IPv4 addresses for an indeterminate period of time;

i) that large blocks of IPv4 address space were allocated to individual companies and organizations prior to the establishment of the RIRs and that the status of some legacy address space is unclear;

j) that a growing market has developed in the transfer of IPv4 addresses between entities with a significant proportion of transferred addresses from legacy allocations which are not subject to the relevant policies of the RIRs;

k) that consistent with the policies developed through the RIRs, all IP numbers continue to be allocated for use on a needs basis and should be returned to the numbering pool when no longer needed,

 *recognizing further*

a) that transfers of IPv4 addresses that are not coordinated through the RIRs could have undesirable consequences;

b) that such consequences could be minimized by accelerating the transition to IPv6,

 *is of the view*

a) that every effort should be made to encourage and facilitate the transition to IPv6;

b) that every effort should be made to facilitate the optimal use of IPv4 addresses, including legacy addresses and by inter-region transfers;

c) that plans and policies should continue to be in place to allow new entrant ISPs to enter the market via access to a reasonable block of IPv4 addresses at reasonable prices;

d) that needs-based address allocation should continue to underpin IP address allocation, irrespective of whether they are IPv6 or IPv4 addresses;

e) that all IPv4 transactions should continue to be reported to the relevant RIRs;

f) that policies of inter RIR transfer across all RIRs should work to ensure that such transfers are needs based and be common to all RIRs irrespective of the address space concerned;

g) that plans and policies should be in place to address the issue of legacy addresses which may not be subject to current policies of the RIRs,

 *invites*

a) Member States to take appropriate measures to encourage, facilitate and support the fastest possible adoption and migration to IPv6;

b) Membership to promote affordable IPv6 compliant products and services as quickly as possible;

c) Member States to contribute to the Council Working Group on International Internet-related Public Policy Issues on matters pertaining to the Internet and the management of Internet resources, including addresses;

d) Member States, and other stakeholders, according to their roles and responsibilities as defined in paragraph 35 of the Tunis Agenda, to participate in the multi-stakeholder institutions directly responsible for the development of technical policy and allocation of these resources so that their policy priorities in these matters can be taken into account.

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