

**DRAFT OPINION (n) IN SUPPORT OF IPv6 ADOPTION AND [CAREFUL MANAGEMENT] OF THE TRANSITION FROM IPv4**

The fifth World Telecommunication 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), 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, and other stakeholders in the areas of IPv4 and IPv6;

 *recognizing*

a) that the IANA functions operator has allocated the last IPv4 blocks to the RIRs;

b) that RIRs [have already exhausted or] 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 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 [until such time when they can be phased out];

i) that approximately 40% of IPv4 address space was allocated in large blocks to individual companies and organizations prior to the establishment of the RIRs [and that this legacy address space is under-utilized];

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;

i) 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 a black market in IPv4 addresses could negatively impact the stability of the Internet; threaten the viability of the WHOIS databases maintained by the RIRs, could result in scattering small blocks of IPv4 addresses thereby putting additional load on the Internet routers, and could eventually undermine the stability of the Internet;

b) that such a black market and its potential consequences could be mitigated by requiring 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, and that transactions be in blocks of no less than /24 (256 addresses);

c) that the cost of transferred IPv4 addresses is orders of magnitude higher than the cost of new addresses from the RIRs and may be out of reach smaller new entrant ISPs, particularly in developing markets;

d) that legacy IPv4 addresses are predominantly in North America but that the need for additional IPv4 addresses is predominantly in Asia and other RIR regions ~~and that there are no policies or procedures in place regarding inter-region transfers~~;

a) that the RIR’s are developing policies to manage the transfer of legacy address space, underpinned by needs based demand for IPv4 addresses;

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 every effort should be made to [carefully oversee] [manage and control] the transfer of IPv4 addresses, including legacy addresses and 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;

 *encourages*

the TSB and BDT to continue their work related to WTSA Resolution 64 in collaboration with all other stakeholders[, including for example the RIRs, ISOC, ICANN and the IETF].

 *invites*

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

b) Members to offer 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 domain names and addresses.