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Report by the Secretary-General

ITU activities related to Internet Protocol (IP)-based networks and management of Internet domain names and addresses; including activities related to Internet governance

Summary

This document reports on ITU activities related to Internet Protocol (IP)-based networks and management of Internet domain names and addresses; including matters related to Internet governance.

Action required

The Council is invited **to endorse** the activities described in this report and **to take appropriate action** with regard to paragraphs 3.3 and 12.7.

References

Res. 101 (Minneapolis, 1998), 102 (Rev. Marrakesh, 2002), 133 (Marrakesh, 2002), Council Res. 1222, WTSA-04 Res. 51, WTSA-04 Res. 52, C99/51, C2000/27, C2000/27Add.A, C20000/27Add.B, C01/EP/8, C02/46, C03/27, C04/28, C05/EP/10.

1. Introduction

1.1 Resolution 101 (Minneapolis, 1998) on Internet Protocol (IP)-Based Networks was adopted in 1998 and reported on in C2000/27 and C2000/27Add.A. Resolution 102 (Rev. Marrakesh, 2002) on Management of Internet domain names and addresses, originally adopted in 1998, was revised at the 2002 Marrakesh Plenipotentiary Conference. Related activities have been reported to Council in C99/51, C2000/27, C2000/27Add.B, C01/EP/8, C02/46, C03/27, and C04/28. Resolution 133 (Marrakesh, 2002) on the Role of administrations of Member States in the management of internationalized (multilingual) domain names was adopted in 2002 and reported on in C04/28. Council Resolution 1222 (Geneva, 2004) on ITU activities relevant to WSIS is a new resolution adopted in 2004. ITU activities related to these resolutions since Council 2004, as well as ongoing developments in this area, are discussed below. This report also describes activities that may relate to "Internet governance", as referred to in the Declaration of Principles and Plan of Action, adopted at the first phase of the World Summit on the Information Society (WSIS) held in December 2003.

• <http://www.itu.int/council> •

2. ITU and its Activities Related to Internet-Protocol (IP) Networks

2.1 As a follow-up to Resolutions 101 (Minneapolis, 1998), 102 (Rev. Marrakesh, 2002) and 133 (Marrakesh, 2002), the Strategy and Policy Unit (SPU), in cooperation with TSB and BDT, has prepared a report on how Internet Protocol (IP) networks and the Internet, as well as their convergence with other kinds of networks, have impacted on ITU's activities. This report and regularly updated news on related ITU activities can be found at:

- <http://www.itu.int/osg/spu/ip/>

A planned update will reflect recent ITU efforts in developing Next Generation Networks (NGN), from both a technical and policy perspective. A joint SPU/TSB/BDT workshop is also planned in the near future to initiate a forward-looking dialogue on the policy and regulatory impact of NGNs.

3. IP Policy Manual

3.1 Following a decision by Council 2003, the Director of TSB, in cooperation with the Director of BDT, has created a project group to prepare an IP Policy Handbook. The purpose is to advise Member States, especially developing countries, on issues related to Internet-Protocol (IP) based networks, including the management of Internet domain names and related issues. The intended audience is policy makers at the national level who are or may be called upon to influence or to decide national policies with respect to IP-based networks and/or IP-based services. Full details, including a questionnaire and draft table of contents, are in TSB Circular 168/Addendum 1 at:

- <http://www.itu.int/md/meetingdoc.asp?type=sitems&lang=e&parent=T01-TSB-CIR-0168>

3.2 The work status, including membership of the project team, replies to questionnaires, input contributions, and current draft of the Handbook is available at:

- <http://www.itu.int/ITU-T/special-projects/ip-policy/>

3.3 Council is requested to endorse this activity. Following Council endorsement, the IP Policy Manual will be published.

4. Top Level Domain Management of “.int”

4.1 As previously reported to Council, in accordance with Resolution 102 (Rev. Marrakesh, 2002), ITU-T Study Group 2 (SG2) is developing a Recommendation to clarify the management of the Internet top level domain “.int”. On the basis of received contributions, a draft was prepared during the May 2004 SG2 meeting. Input on certain specific topics was sought from ICANN, via a liaison statement and a reply was received from ICANN (SG2 TD 29 WP1). In January 2005, the United Nations Chief Executive Board for Coordination (CEB) endorsed the SG2 draft Recommendation (COM 2-D 13). On the basis of those inputs, in February 2005, SG2 determined the Recommendation for approval at its subsequent meeting and sent a corresponding liaison to ICANN (see SG2 document TD 7 Rev 2 (WP.1/2)).

5. ITU-D Activities

5.1 In accordance with instructions in Resolution 102 (Rev. Marrakesh, 2002) and within the framework of the IsAP (Istanbul Action Plan-WTD 2002), Programme 3: E-strategies and e-services/applications, a number of projects since Council 2004 have been implemented or are underway to integrate IP-based applications and value-added services in the development of telecommunication networks, including, *inter alia*:

- Bosnia and Herzegovina: E-government project including technical assistance in assessing needs, identifying technology and policy requirements and providing guidance in

elaboration of strategies for implementation; BDT funded and operational enables an increase in efficiency in the business processes and procedures of the Regulatory Agency.

- Burkina Faso, Equatorial Guinea, Mauritania, Cameroon, Chad and Rwanda: IP planning software delivered to design IP-based networks and for training purposes.
- Cameroon, Kyrgyzstan and Rwanda: EC-ITU E-government project to enhance government services through the use of secure and trusted Internet infrastructure and applications; includes providing 16 public Internet centres for accessing e-government services and extend government services to citizens in urban areas where physical administrative infrastructure does not exist.
- Lebanon: Broadband infrastructure for BCD-Beirut; designing and building of broadband IP-based network in Beirut Central District.
- Mali: Internet for Schools project in partnership with Swisscom, project implemented successfully with more than 700 students at Timbuktu High School can use the Internet to access a wide range of information and services for enhancing knowledge in a modern education system.
- Mauritania: E-government project; implementation of IP-based broadband network in Mauritania for e-government; project underway and current phase will be finished in 2005.
- Saudia Arabia and Oman: Assistance and guidelines to Oman and Saudi Telecom to introduce broadband “triple play” services on IP-based platforms.
- Venezuela: E-health project using satellite communications for Internet and voice services; equipment for two remote locations delivered to ITU partners working on implementation of telemedicine application.

5.2 The BDT has also organized several workshops, with support from TSB and SPU, to discuss general policy, operational and technical issues concerning the Internet, including management of Internet domain names and addresses, for the benefit of Member States, especially for least developed countries, including, *inter alia*:

- Sanaa, Yemen: September 2004 - Workshop on policies, numbering plan, DNS and ENUM in cooperation with ITU Arab Center of Excellence and TSB.
- Kiev, Ukraine: September 2004 - Workshop on activities of ITU-T in global standardization.
- French-speaking African countries: April–June 2005 - Online course on VoIP for with 30 participants from Ministries, operators and regulators, see:
 - <http://www.itu.int/ITU-D/hrd/elearning/>
- Nairobi, Kenya: May 2005 - Workshop on VoIP for English-speaking African countries with participants from Ministries, operators and regulators.
- Dubai, United Arab Emirates: November 2004 - E-Government and IP Symposium for Arab Region. The Dubai Declaration (<http://www.itu.int/ITU-D/arb/Events/E-GOV/IP/>) states, *inter alia*:
 - “The management and the supervision of the internet resources (domain name, IP address, servers etc...) should be through the International Telecommunication Union (ITU) in coordination with all concerned parties.”

5.3 Future IP-related events planned include, *inter alia*:

- Under aegis of implementation of the Dubai Declaration, two workshops on IDN and Internet Exchange Points in the Arab Region are planned in the third quarter of 2005 (see also 7. and 14. below).
- IP Symposium for Asia and Pacific region in third quarter 2005.

- Global IP Policy Experts Forum in third quarter 2005 in Geneva.
- Workshop on Cybersecurity in fourth quarter 2005 in Americas region.

5.4 Additional details on the above-mentioned projects and workshops as well as future BDT events can be found at:

- <http://www.itu.int/ITU-D/e-strategy/>

6. ENUM

6.1 ENUM continues to merit close attention by ITU Member States, due to its potential impact on national policy, regulatory and/or legislative frameworks. ENUM takes numbers from the international public telecommunication numbering plan (ITU-T Recommendation E.164) and incorporates them into the DNS for the purpose of identifying and finding network resources; this includes the possibility of assigning E.164 resources to IP-based devices. Work in ITU-T SG2 continues to progress, based on the explicit understanding that the existing role and sovereignty of Member States with respect to the allocation and management of their country code numbering resources, including the potential provisioning of those resources in the DNS, will be respected. A draft ITU-T Recommendation (provisionally entitled E.A-ENUM) is under preparation and will be further discussed in SG2.

6.2 Reports on ENUM trial activities within Member States can be found at:

- <http://www.itu.int/ITU-T/inr/enum/trials.html>.

6.3 General information on ENUM, including a tutorial paper, can be found at:

- <http://www.itu.int/ITU-T/inr/enum>.

6.4 In addition, recent news and reference material related to ENUM can be found at:

- <http://www.itu.int/osg/spu/enum/>

6.5 Liaisons have been exchanged between SG2 and the Internet Architecture Board (IAB) on technical and administrative issues related to the administration of the top-level registry for ENUM.

6.6 As reported in 2004, ITU Member States continue to consider the appropriate infrastructure, responsibility, delegation and authority for the ENUM “root zone”, which is the location in the DNS where E.164 country code entries would be assigned. While considerable discussion has taken place, no final decision has yet been made. This could have an impact on the interim designation of the domain “e164.arpa” as well as its administration.

6.7 In a related activity, the SPU and TSB jointly organized with the Asia Pacific Telecommunity (APT), a workshop on ENUM held in May 2004 in Brunei, Darussalam. The agenda, presentations, and conclusions of that workshop can be found on the APT website at:

- <http://www.aptssec.org/meetings/2004/ENUMIDN/default.htm>

6.8 BDT, in cooperation with TSB and SPU organized a presentation on ENUM at the November 2004 African Forum on Telecommunication Regulation in Kampala, Uganda. This presentation can be found at:

- <http://www.itu.int/osg/spu/presentations/2004/enum-fta-uganda-rs.pdf>

6.9 As previously reported to Council (7.9 of C04/28), in 2004, ICANN solicited applications for new top level domains. Following a comment and evaluation procedure, ICANN has authorized negotiations related to proposed commercial and technical terms for several of the proposed top level domains. The reply by the President of ICANN to the letter from the ITU Secretary-General concerning telephony-related top level domains referenced in 7.9 of C04/28 can be found in ITU-T SG2 TD 22 (WP1) at:

- <http://www.itu.int/md/meetingdoc.asp?type=mitems&lang=e&parent=T05-SG02-050216-TD-WP1-0022>

7. Internationalized Domain Names

7.1 The deployment of internationalized (multilingual) domain names (IDN) raises a number of complex issues. These include, *inter alia*, technical and interoperability issues, administrative arrangements for multilingual domains and top level domains, competition policy and market access, intellectual property and dispute resolution, as well as cultural and social issues.

7.2 For more information on IDN, please refer to the briefing paper at:

- <http://www.itu.int/mdns/briefingpaper/index.html>

and the presentations available at:

- <http://www.itu.int/mdns/presentations/index.html>.

7.3 The SPU and TSB jointly organized with the APT a workshop on IDN in May 2004 in Brunei, Darussalam. The agenda, presentations, and conclusions of that workshop can be found at:

- <http://www.aptsec.org/meetings/2004/ENUMIDN/default.htm>

7.4 A technical briefing on IDN was held on 6 October 2004 at the World Telecommunication Standardization Assembly (WTSA-04). The agenda and presentations can be found at:

- http://www.itu.int/ITU-T/wtsa-04/tech_idn.asp

7.5 The holding of IDN workshops in other locations are under consideration, see 5.3 above.

7.6 Contributions on the topic of IDN were submitted to the 16-24 February 2005 meeting of ITU-T Study Group 2. As a result, a correspondence group was created to discuss the issues (see 16 of 3.2 of the Report of the SG2 meeting (COM 2-R1) and TD 55 Rev 1 (WP.1/2)).

7.7 Contributions on the topic of IDN were submitted to the 30 March-8 April 2005 meeting of ITU-T Study Group 17. An intensive debate took place on what the Study Group could develop as an action plan to fulfill the instruction given in Resolution 48 (WTSA-04). A correspondence group has been established in order to further refine the areas for study and define appropriate working procedures.

8. Country Code Top Level Domains

8.1 To follow-up the first Workshop on Member States' Experiences with ccTLDs reported to Council 2003 in C03/27, the Director of TSB, in cooperation with ICANN, organized a second workshop in July 2004, in Kuala Lumpur, Malaysia. Over 150 people, including representatives of governments, ccTLD operators, and ITU-T Sector Members attended the workshop. Participants expressed their satisfaction with the event. The agenda and presentations of that workshop can be found at:

- <http://www.itu.int/ITU-T/worksem/cctld/kualalumpur0704/>

8.2 A contribution on this topic was submitted to the 16-24 February 2005 meeting of ITU-T Study Group 2, see 13 of 3.2 of the Report of the SG2 meeting (COM 2-R1).

9. IP addresses

9.1 In October 2004, ICANN entered into an agreement with the Number Resource Organization (NRO), whose members are the Regional Internet Registries (RIRs). See:

- <http://www.icann.org/aso/aso-mou-29oct04.htm>

9.2 A technical briefing on IPv6 was held on 6 October 2004 at WTSA-04. The agenda and presentations can be found at:

- http://www.itu.int/ITU-T/wtsa-04/tech_idn.asp

9.3 The Regional Internet Registries (RIRs) are developing policy proposals regarding the allocation of IPv6 address space from IANA (ICANN) to the RIRs. Discussions and proposals can be found at:

- <http://www.apnic.net/docs/policy/proposals/prop-005-v003.html>
- <http://www.ripe.net/ripe/draft-documents/ipv6.html>
- <http://mailman.apnic.net/mailman/listinfo/global-v6>

9.4 AFRNIC been recognized as an RIR for Africa, see

- <http://www.icann.org/minutes/resolutions-08apr05.htm>

9.5 An IPv6 Workshop will be held in Geneva, 22-23 June 2005; see TSB Circular 28 and:

- <http://www.itu.int/ITU-T/worksem/ipv6/200506/index.html>

9.6 A proposal by TSB Director to introduce "dual systems" for allocation of IPv6 addresses has received comments from RIRs and other organizations. Similar proposals have been made by others and discussion on this issue continues.

10. ITU Participation in ICANN Bodies

10.1 ITU representatives continue to participate in ICANN bodies. The ITU-T continued its participation in the ICANN Technical Liaison Group, of which ITU-T is a member. ICANN's Government Advisory Committee (GAC) changed its operating rules so that intergovernmental organizations, including the ITU, have the status of observers. Consistent with that status and budget constraints, representatives of SPU, TSB, and BDT participate in GAC activities.

10.2 In accordance with Article XI-A.7 of the ICANN bylaws, in December 2004, the Director of TSB named Mr. Richard Thwaites of Australia (former Chairman of ITU-T Study Group 3) to be a non-voting liaison to the ICANN Board for the Technical Liaison Group (TLG). Furthermore, in December 2004, the TSB Director, on behalf of TLG, nominated Mr. Rainer Handel of Siemens to be a member of ICANN Nomination Committee.

10.3 ICANN's most recent quarterly progress report to the US Department of Commerce on Progress toward the objectives of the Memorandum of Understanding can be found at:

- <http://www.icann.org/general/mou-status-report-07apr05.pdf>

11. Protection of Country Names

11.1 The issue of protecting the names of countries in the Domain Name System (DNS) has been raised previously in Council (see 2.6 of Council 2002 Summary Record of the Thirteenth Plenary Session, 2 May 2002).

11.2 On 6 October 2003, ICANN created a committee, which included a representative of ITU, "for the purpose of analyzing the practical and technical aspects of implementing the WIPO recommendations, and notably the implications for the UDRP". The announcement of the creation of the committee can be found at:

- <http://www.icann.org/announcements/announcement-06oct03.htm>

11.3 The committee worked primarily by electronic methods and presented its report to the ICANN Board in July 2004. The ICANN Board considered this matter in December 2004 and resolved to invite further comment. The announcement and comment area can be found at:

- <http://www.icann.org/committees/JWGW2/>

11.4 To date, ICANN has not taken any decisions regarding this matter.

12. Internet Governance and the World Summit on the Information Society

12.1 The first phase of the World Summit on the Information Society (WSIS) could not resolve differences on Internet Governance. Thus the WSIS Declaration of Principles (paragraphs 48-50) and Plan of Action (paragraphs 13 b-d) task the “Secretary General of the United Nations to set up a working group on Internet governance”

(http://www.itu.int/wsis/documents/doc_multi.asp?lang=en&id=1161|1160).

12.2 On 11 November 2004, the Secretary General of the United Nations formally created the Working Group on Internet Governance (WGIG) and named Mr. Nitin Desai as Chairman (<http://www.wgig.org/>).

12.3 Following up on Council Resolution 1222, the elected officials prepared input contributions for the 13-14 December 2004 meeting of the Council Working Group on WSIS, including a paper by TSB Director entitled "ITU and Internet Governance"

(http://www.itu.int/council/wsis/wsis_WG.html). The Council Working Group on WSIS requested the Secretariat to prepare two new papers for consideration at its subsequent meeting on 3-4 May 2005. Those papers, and the Report of the meeting, can be found at the above website reference.

12.4 In accordance with Resolution 46 of WTSA-04, the Director of TSB issued Circulars 5 and 16, inviting the membership to participate in a short-term group whose purpose was to provide the first meeting of the Council Working Group on WSIS in 2005 with a definition relevant to the technical aspects of the telecommunication networks used by the Internet (<http://www.itu.int/ITU-T/tsb-director/itut-wsis/cwg-wsis-0305.html>). The group met on 2 May 2005.

12.5 Resources and information for the ITU Membership related to Internet governance can be found at <http://www.itu.int/osg/spu/intgov/> and <http://www.itu.int/ITU-T/tsb-director/itut-wsis/index.html>.

12.6 It should be noted that some participants in discussions on Internet governance, in particular from civil society, state that ITU is not sufficiently open or transparent, in particular because ITU-T Recommendations are not available for free on the world-wide web.

12.7 WTSA-04 discussed allowing free access to ITU-T Recommendations and agreed to request “the TSB Director, in his report to the Council on the results of the Assembly, to reflect WTSA’s support for increasing the transparency of ITU-T work and encouraging wider participation in ITU-T activities, including through free on line access to Recommendations. In particular, the “WTSA invites the Council to consider this matter and, in particular, to consider the financial implications of free on line access Recommendations with a view to its implementation, as appropriate.” (WTSA-04 Book 2, 3rd and 4th Meetings of Committee 3). In this regard, Council is invited to consider this issue within the context of discussion of this report.

13. Countering Spam Activities

13.1 During the Geneva phase of the WSIS, unsolicited commercial communication, more commonly known as spam, was identified as one of the major problems affecting today's online world. Following up on that, SPU organized an “ITU WSIS Thematic Meeting on Countering Spam”, which took place 7 to 9 July 2004, at the International Conference Center of Geneva (CICG). Full information, including the Report of the Chairman of the Workshop, can be found at:

- <http://www.itu.int/osg/spu/spam/meeting7-9-04/>

13.2 As follow-up to that workshop, the ITU-T Telecommunications Standardization Advisory Group (TSAG) sent a liaison to the Internet Engineering Task Force (IETF), inviting IETF to consider what, if any, activities could or should be undertaken jointly with respect to countering spam (see TSAG TD 444).

13.3 WTSA-04, at its 5-14 October 2004 meeting in Florianopolis, adopted two Resolutions concerning spam, No. 51: Combating spam, and No. 52: Countering spam by technical means.

13.4 Resolution 51 instructs the TSB Director, in cooperation with the Directors of the other Bureaux and the Secretary-General to prepare urgently a report to the Council on relevant ITU and other international initiatives for countering spam, and to propose possible follow-up actions for consideration by the Council. The report on relevant ITU activities subsequent to WTSA, and in other international initiatives for countering spam is found in Document C05/EP/10.

Possible follow-up actions for consideration by the Council include:

- Encourage liaison with other bodies working on countering spam such as OECD.
- Liaising with the United National Commission for International Trade Law (UNCITRAL), if it is felt desirable to consider work on an international model law to counter spam.
- Inviting contributions with a view to developing an appropriate international Memorandum of Understanding, consistent with ITU's mission, that could be deposited with the Secretary-General of ITU in accordance with Resolution 100 (Minneapolis, 1998).

13.5 ITU-T Study Group 17 (SG17) responsibilities and work programme include items of relevance to countering spam. At the 30 March-8 April 2005 meeting of SG17, a correspondence group was established to further progress the work initiated and considerations were raised on whether a new Question would be necessary to emphasize these activities.

13.6 It is planned to hold a one-day session on countering spam at the ITU WSIS Thematic Meeting on Cybersecurity planned for 28 June-1 July 2005.

13.7 It is planned that further study, assessment and work on ways that ITU and its Member States can cooperate in combating or limiting spam would be one of the topics addressed at the 14-15 November 2005 meeting of the Global Symposium for Regulators.

14. Internet Exchange Points

14.1 With respect to a request made by Council 2004 (see 3.2 of C04/78), a workshop is expected to be held in conjunction with the ITU-T Study Group 3 Regional Tariff Group meeting for Africa and International Internet connectivity will be one of the main discussion items. See also 5.3 above.

14.2 In addition, there is a joint ITU-UNDP partnership project on Cost effective Internet Access in Africa. The objective of this project is to contribute towards the building of affordable Internet infrastructure backbone in Africa through the implementation of national and regional Internet exchange points (IXPs) and sharing of experiences and best practices between developing countries including public and private sector entities.

14.3 A draft discussion paper entitled Via Africa: Creating local and regional IXPs to save money and bandwidth prepared for IDRC and ITU for the 5th Annual Global Symposium for Regulators is available at:

- [http://www.itu.int/ITU-D/treg/Events/Seminars/2004/GSR04/documents/Africa IXP Discussion Paper.pdf](http://www.itu.int/ITU-D/treg/Events/Seminars/2004/GSR04/documents/Africa%20IXP%20Discussion%20Paper.pdf)
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