

RESOLUTION 101 (REV. BUCHAREST, 2022)

Internet Protocol-based networks

The Plenipotentiary Conference of the International Telecommunication Union (Bucharest, 2022),

recalling

- a) Resolution 101 (Rev. Bucharest, 2022) of the Plenipotentiary Conference;
- b) Resolutions 102, 130, 133, 180 and 197 (Rev. Bucharest, 2022) of this conference;
- c) United Nations General Assembly (UNGA) Resolution 70/1, on transforming our world: the 2030 Agenda for Sustainable Development;
- d) UNGA Resolution 70/125, on the outcome document of the UNGA high-level meeting on the overall review of the implementation of the outcomes of the World Summit on the Information Society (WSIS);
- e) the outcomes of the Geneva (2003) and Tunis (2005) phases of WSIS, especially §§ 27 c) and 50 d) of the Tunis Agenda for the Information Society, relating to international Internet connectivity;
- f) the WSIS+10 Statement on the implementation of WSIS outcomes and the WSIS+10 Vision for WSIS beyond 2015, which were adopted at the ITU-coordinated WSIS+10 High-Level Event (Geneva, 2014), based on the Multistakeholder Preparatory Platform (MPP) process, together with other United Nations agencies and inclusive of all WSIS stakeholders, were endorsed by the Plenipotentiary Conference (Busan, 2014) and were submitted to the UNGA overall review;

- g)* No. 196 of the ITU Convention, which stipulates that telecommunication standardization study groups shall pay due attention to the study of questions and to the formulation of recommendations directly connected with the establishment, development and improvement of telecommunications in developing countries¹ at both the regional and international levels;
- h)* Resolution 23 (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference (WTDC), on Internet access and availability for developing countries and charging principles for international Internet connection;
- i)* Resolution 69 (Rev. Hammamet, 2016) of the World Telecommunication Standardization Assembly (WTSA), on non-discriminatory access and use of Internet resources and telecommunications/information and communication technologies (ICTs);
- j)* Recommendation ITU-T D.50 of the ITU Telecommunication Standardization Sector (ITU-T), on general tariff principles – principles applicable to international Internet connection;
- k)* Resolution 64 (Rev. Geneva, 2022) of WTSA, on Internet Protocol (IP) address allocation and facilitating the transition to and deployment of IP version 6 (IPv6);
- l)* UNGA Resolution 68/302, on the review of WSIS;
- m)* Opinion 1 (Geneva, 2013) of the World Telecommunication/ICT Policy Forum (WTPF), on promoting Internet exchange points (IXPs) as a long-term solution to advance connectivity;
- n)* Opinion 2 (Geneva, 2013) of WTPF, on fostering an enabling environment for the greater growth and development of broadband connectivity;
- o)* Opinion 3 (Geneva, 2013) of WTPF, on supporting capacity building for the deployment of IPv6;

¹ These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

p) Opinion 4 (Geneva, 2013) of WTPF, in support of IPv6 adoption and transition from IPv4;

q) Opinion 5 (Geneva, 2013) of WTPF, on supporting multistakeholderism in Internet governance;

r) Opinion 6 (Geneva, 2013) of WTPF, on supporting operationalizing the enhanced cooperation process;

s) the relevant opinions of WTPF-21,

aware

a) that one of the purposes of the Union is to promote the extension of new telecommunication technologies to all the world's inhabitants;

b) that one of the purposes of the Union is to promote and enhance participation of entities and organizations in the activities of the Union and foster fruitful cooperation and partnership between them and Member States;

c) that, in order to fulfil its purposes, the Union should, among other things, facilitate the worldwide standardization of telecommunications, with a satisfactory quality of service,

considering

a) that advances in the global information infrastructure, including the development of IP-based networks used for the Internet, and future protocol developments, continue to be an issue of crucial importance, as an important enabler of achievement of the Sustainable Development Goals (SDGs) as well as social, economic, environmental and cultural development in the 21st century;

b) that emerging telecommunications/ICTs will continue to transform both the Internet and overall achievement of the SDGs;

c) the need for preserving and promoting multilingualism on the Internet for an integrating and inclusive information society;

- d)* that the Internet permits the introduction of new additional applications in telecommunication/ICT services based on its highly advanced technology, e.g. steady progress in adopting cloud computing, and that e-mail and text messaging, voice over IP, video and real-time TV (IPTV) over the Internet continue to record high levels of use, even though there are challenges regarding quality of service, uncertainty of origin and the high cost of international connectivity;
- e)* that current and future IP-based networks and future IP developments will continue to introduce dramatic changes in the way we acquire, produce, circulate and consume information;
- f)* that the broadband development and rising demand for Internet access being experienced particularly in developing countries lead to the need for affordable international Internet connectivity;
- g)* that Resolution 23 (Rev. Buenos Aires, 2017) noted that the composition of costs for operators, whether regional or local, is, in part, significantly dependent on the type of connection (transit or peering) and the availability and cost of backhaul and long-haul infrastructure, as it relates to developing countries;
- h)* that Opinion 1 (Geneva, 2013) of WTPF deems that the establishment of IXPs is a priority to tackle connectivity problems, improve service quality and increase network connectivity and resilience, fostering competition and reducing interconnection costs;
- i)* that Resolution 77 (Rev. Buenos Aires, 2017) of WTDC recognizes the work of the Internet Society (ISOC), the Internet Exchange Federation and the regional IXP associations and other stakeholders to support the establishment of IXPs in developing countries in order to promote better connectivity;
- j)* that results of studies on international Internet connection costs, especially for developing countries, should continue to be examined in order to improve affordable Internet connectivity;

k) Resolution 1 (Dubai, 2012) of the World Conference on International Telecommunications, on special measures for landlocked developing countries (LLDCs) and small island developing States (SIDS) for access to international optical fibre networks,

considering further

a) that the ITU Telecommunication Development Sector has made significant progress and carried out several studies on the promotion of infrastructure and the use of the Internet in developing countries under its 2010 Hyderabad Action Plan, its 2014 Dubai Action Plan and its 2017 Buenos Aires Action Plan, which endorsed the continuation of these studies, through human capacity-building efforts such as its Internet training centre initiative;

b) that studies are ongoing in ITU-T on IP-based network issues, including service interoperability with other telecommunication networks, numbering, signalling requirements and protocol aspects, security and infrastructure component costs, issues associated with migration from existing networks to next-generation networks and evolution to future networks, and implementation of the requirements of Recommendation ITU-T D.50;

c) that the general cooperation agreement between ITU-T and ISOC/Internet Engineering Task Force (IETF), as referred to in Supplement 3 to the ITU-T Series A recommendations, continues to exist,

recognizing

a) that IP-based networks have evolved to a widely accessible medium used for global commerce and communication, and there is therefore a need to continue to identify the global and regional activities related to IP-based networks with respect to, for example:

- i) infrastructure, interoperability and standardization;
- ii) Internet naming and addressing;
- iii) dissemination of information about IP-based networks and the implications of their development for ITU Member States, particularly the developing countries;

- iv) support and advice available for ITU Member States, particularly the developing countries, from ITU and other entities and organizations;
- b) that significant work on IP-related issues and the future Internet is being conducted within ITU and many other international bodies;
- c) that the quality of service of IP-based networks should be consistent with ITU-T recommendations and other recognized international standards;
- d) that it is in the public interest that IP-based networks and other telecommunication networks should be both interoperable and provide global reachability, bearing in mind *recognizing c)* above;
- e) that the significance of interoperability and seamless transfer of data enabled by IP-based networks and other telecommunication networks is an important factor to enable growth of the economy, including the digital economy,

requests the ITU Telecommunication Standardization Sector

to continue its collaborative activities on IP-based networks with ISOC/IETF and other relevant recognized organizations, in respect of interconnectivity with existing telecommunication networks and migration to future networks,

requests the three Sectors

to continue to consider and update their work programmes on IP-based networks and on migration to future networks, including strengthening collaboration with other entities and organizations for the benefit of Member States and ITU members, taking into account the impact of new and emerging telecommunication/ICT services and technologies,

resolves

1 to explore ways and means, in accordance with the Tunis Agenda, for greater reciprocal collaboration and coordination between ITU and relevant organizations² involved in the development of IP-based networks and the future Internet in the context of emerging telecommunications/ICTs, through cooperation agreements, as appropriate, in order to increase the role of ITU in Internet governance, and to promote greater participation by Member States in Internet governance, so as to ensure maximum benefits to the global community and promote affordable international connectivity;

² 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.

2 that ITU shall fully embrace and promote the opportunities for telecommunication/ICT development that arise from the growth of IP-based services, including services using new and emerging telecommunications/ICTs, in conformity with the Union's purposes and the outcomes of the Geneva (2003) and Tunis (2005) phases of WSIS, taking into account the quality and security of services and the affordability of international connectivity for all, especially for developing countries, LLDCs and SIDS;

3 that ITU shall clearly identify, for its Member States and Sector Members and for the general public, the range of Internet-related issues that fall within the responsibilities incumbent on the Union under its basic texts and the activities in the WSIS outcome documents and the 2030 Agenda for Sustainable Development, where ITU has a role;

4 that ITU shall continue to collaborate with other relevant organizations and stakeholders to ensure that growth in IP-based networks, along with and taking into consideration traditional networks, delivers maximum benefits to the global community, and shall continue to participate, as appropriate, in any directly related new international initiatives, such as the initiative in cooperation with the United Nations Educational, Scientific and Cultural Organization (UNESCO) on the joint ITU/UNESCO Broadband Commission for Sustainable Development formed for this purpose;

5 to continue the study of international Internet connectivity as an urgent matter, as called for in § 50 d) of the Tunis Agenda (2005);

6 to take into account the provisions of Resolution 23 (Rev. Buenos Aires, 2017), in particular undertaking studies on the structure of international Internet connection costs for developing countries, with emphasis on the influence and effects of the connection mode (transit and peering), secure cross-border connectivity, the deployment of IXPs, and the availability and cost of backhaul and long-haul physical infrastructure,

instructs the Secretary-General

1 to prepare a detailed annual report on the implementation of this resolution to the ITU Council with the appropriate input from Member States, Sector Members, the three Sectors and the General Secretariat, that provides a comprehensive summary of the activities that ITU is already undertaking in regard to IP-based networks and the related impact of new and emerging telecommunications/ICTs in these networks as well as any changes thereto, including the development and deployment of future networks, and of the roles and activities of other relevant international organizations, describing their involvement in IP-based network issues; the report shall indicate the degree of cooperation between ITU and these organizations, drawing the required information wherever possible from existing sources, and containing concrete proposals on improving ITU activities and such cooperation, and shall be distributed widely among the Member States and Sector Members, the advisory groups of the three Sectors and other groups involved one month before the Council session;

2 based on this report, to continue collaborative activities related to IP-based networks, especially those related to the implementation of the relevant outcomes of the two phases of WSIS (Geneva, 2003, and Tunis, 2005), and to consider the WSIS+10 Statement on the implementation of WSIS outcomes and the WSIS+10 Vision for WSIS beyond 2015, which were adopted at the ITU-coordinated WSIS+10 High-Level Event, based on the MPP process, together with other United Nations agencies and inclusive of all WSIS Stakeholders, were endorsed by the Plenipotentiary Conference (Busan, 2014) and were submitted to the UNGA overall review;

3 to continue to raise awareness of the critical importance for sustainable development of affordable connectivity for all, including in the United Nations High-level Political Forum on Sustainable Development,

instructs the Director of the Telecommunication Development Bureau

1 to provide capacity building to developing countries, including least developed countries, SIDS and LLDCs, in order to connect the unconnected, including through provision of the necessary assistance by the ITU regional offices to achieve this goal through collaboration and cooperation with relevant entities and organizations;

- 2 to promote awareness among ITU members about the support available from ITU and from other relevant organizations to promote the development and deployment of IP-based networks;
- 3 to provide the necessary information and best-practice guidance related to the implementation of this resolution;
- 4 to coordinate actions to provide training and technical assistance with regard to the implementation of this resolution,

invites the ITU Council

to study the report of the Secretary-General, take into account comments, if any, made by the advisory groups of the three Sectors through their respective Bureau Directors on implementation of this resolution, and take necessary action, including to continue supporting efforts related to this resolution, as appropriate,

invites Member States and Sector Members

- 1 to participate in, and follow the progress of, the current work of the Sectors of the Union related to this resolution;
- 2 to increase awareness at national, regional and international level among all interested stakeholders to facilitate their participation in relevant ITU activities, and in any other relevant activities emanating from the Geneva (2003) and Tunis (2005) phases of WSIS.

(Minneapolis, 1998) – (Rev. Antalya, 2006) – (Rev. Guadalajara, 2010) – (Rev. Busan, 2014) – (Rev. Dubai, 2018) – (Rev. Bucharest, 2022)
