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|  | **Document CWG-Internet-22/2** |
| **8 August 2025** |
| **English only** |
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| Report by the Secretary-General |
| ITU INTERNET ACTIVITIES: RESOLUTIONS 101, 102, 133, 180 AND 206 |
| **Purpose**This report summarizes ITU’s activities related to Plenipotentiary Conference (PP) Resolution 101 (Rev. Bucharest, 2022), “Internet Protocol-based networks”; Resolution 102 (Rev. Bucharest, 2022), “ITU’s role with regard to international public policy issues pertaining to the Internet and the management of Internet resources, including domain names and addresses”; Resolution 133 (Rev. Bucharest, 2022), “Roles of administrations of Member States in the management of Internationalized (multilingual) domain names”; Resolution 180 (Rev. Bucharest, 202), “Promoting deployment of Internet Protocol version 6” and Resolution 206 (Dubai, 2018), “OTTs”.**Action required**In line with Resolution 102 (Rev. Bucharest, 2022), the Council Working Group on international Internet-related public policy issues is invited to **consider** and **discuss** the activities of the Secretary-General and Directors of the Bureaux in relation to the implementation of the resolutions.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**References** [*CWG-Internet website*](https://www.itu.int/en/council/cwg-internet/Pages/default.aspx)*; Plenipotentiary Resolutions* [*101*](https://www.itu.int/en/council/Documents/basic-texts-2023/RES-101-E.pdf)*,* [*102*](https://www.itu.int/en/council/Documents/basic-texts-2023/RES-102-E.pdf)*,* [*133*](https://www.itu.int/en/council/Documents/basic-texts-2023/RES-133-E.pdf)*,* [*180*](https://www.itu.int/en/council/Documents/basic-texts-2023/RES-180-E.pdf) *(Rev. Bucharest, 2022) and* [*206*](https://www.itu.int/en/council/Documents/basic-texts-2023/RES-206-E.pdf) *(Dubai, 2018); Council Resolutions* [*1305*](http://www.itu.int/md/S09-CL-C-0105) *(2009),* [*1336*](http://www.itu.int/md/S15-CL-C-0113/en) *(Mod. 2015),* [*1344*](http://www.itu.int/md/S15-CL-C-0112/en) *(Mod. 2015); WTSA Resolutions* [*47*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.47-2022) *(Rev. Dubai, 2012),* [*48*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.48-2022) *(Rev. Geneva, 2022),* [*49*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.49-2016) *(Rev. Hammamet, 2016),* [*50*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.50-2022) *(Rev. Geneva, 2022),* [*52*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.52-2022) *(Rev. Hammamet, 2016),* [*58*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.58-2022)*,* [*60*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.60-2022)*,* [*64*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.64-2022) *(Rev. Geneva, 2022),* [*69*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.69-2022)*,* [*75*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.75-2022) *(Rev. Geneva, 2022),* [*98*](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.98-2022) *(Rev. Geneva, 2022);* [*WTDC-17/Buenos Aires Action Plan Objective 3/Output 3.3*](https://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC17/Documents/WTDC17_FinalReport_en.pdf)*, WTDC Resolutions* [*20*](https://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC17/Documents/WTDC17_FinalReport_en.pdf) *(Rev. Buenos Aires, 2017),* [*30*](https://www.itu.int/dms_pub/itu-d/opb/tdc/D-TDC-WTDC-2022-PDF-E.pdf)*,* [*45*](https://www.itu.int/dms_pub/itu-d/opb/tdc/D-TDC-WTDC-2022-PDF-E.pdf) *and* [*63*](https://www.itu.int/dms_pub/itu-d/opb/tdc/D-TDC-WTDC-2022-PDF-E.pdf) *(Rev. Kigali, 2022); Council Documents [C16/33](http://www.itu.int/md/S16-CL-C-0033/en),* [*C17/33*](https://www.itu.int/md/S17-CL-C-0033/en)*,* [*C18/33*](https://www.itu.int/md/S18-CL-C-0033/en)*,* [*C19/33*](https://www.itu.int/md/S19-CL-C-0033/en)*,* [*C20/33*](https://www.itu.int/md/S20-CL-C-0033/en)*,* [*C21/33*](https://www.itu.int/md/S21-CL-C-0033/en)*,* [*C22/33*](https://www.itu.int/md/S22-CL-C-0033/en)*,* [*C23/33*](https://www.itu.int/md/S23-CL-C-0033/en)*,* [*C24/33*](https://www.itu.int/md/S24-CL-C-0033/en), [*C25/33*](https://www.itu.int/md/S25-CL-C-0033/en) |

# 1 Introduction

This report describes ITU’s activities related to the 2022 Plenipotentiary Conference Resolutions 101, 102, 133, 180 and 206 for the reporting period from March 2025 till date.

# 2 Activities related to Internet Protocol (IP) networks, the development of next-generation networks (NGN) and future Internet, including policy and regulatory challenges

The new/revised [ITU-T Recommendations](https://www.itu.int/itu-t/workprog/wp_search.aspx?isn_sp=8265&isn_status=-1,2&details=0&field=acdefghijo) and other texts which have been approved for this reporting period, including those relevant to this Report, can be found under the different ITU-T Study Groups (SGs).

## 2.1 IMT-2020

ITU-T SG13approved the following 8 Recommendations:

 Y.3088, Information-centric networking in networks beyond IMT-2020 - Requirements and functional framework to support distributed ledger technology

 Y.3145, Application addressing in multi-access edge computing in IMT-2020 networks and beyond

 Y.3146, Functional architecture for quality of service assurance of deterministic communication services in local area networks for IMT-2020 and beyond

 Y.3147, Quality of service requirements and framework of deterministic communications for remote device control services over IMT-2020 and beyond

 Y.3217, Fixed, mobile and satellite convergence – Peer-to-peer services for IMT-2020 networks and beyond

 Y.3218, Fixed, mobile and satellite convergence – Service scheduling for IMT-2020 networks and beyond

 Y.3219, Fixed, mobile and satellite convergence - Deterministic networking for IMT-2020 networks and beyond

 Y.3220, Fixed, mobile and satellite convergence - Location service enhancement for IMT‑2020 networks and beyond

ITU-T Study Groups 2, 11, 13, 17, 20 and 21 have 120+ draft recommendations on IMT-2020 under development.

## 2.2 Internet of Things (IoT) and Smart Cities

**2.2.1** ITU-T SGs 5, 17 and 20 approved the following 5 Recommendations

– L.1621, Key Performance Indicators for circular cities

– X.2013, Security measures for digital twin federation in smart cities and communities

– X.2050, Security requirements for monitoring physical city assets

– Y.4509, Functional architecture of artificial intelligence-enabled collaborative services across device, edge and cloud environments for the Internet of Things and smart cities

– Y.Suppl.87, Maturity model of digital management capability of industrial equipment used in smart sustainable cities.

ITU-T Study Groups 2, 3, 5, 11, 17, and 20 have 64 draft Recommendations on IoT and 16 draft Recommendations on smart cities under development.

**2.2.2** The standardization of IoT test specifications is accelerating, supported by the increasing collaboration of ITU-T and oneM2M. ITU-T SG20 continued coordination on IoT in its ITU-T Joint Coordination Activity on Internet of Things and Smart Cities and Communities (JCA-IoT and SC&C) and is also in close collaboration with IETF, oneM2M, W3C, LoRa Alliance and TMForum.

**2.2.3** The [United for Smart Sustainable Cities (U4SSC)](https://u4ssc.itu.int/) initiative, supported by 19 UN bodies, advocates for public policy to ensure that ICTs —and ICT standards in particular— play a definitive role in accelerating digital transformation in cities. Under the [United for Smart Sustainable Cities (U4SSC) initiative](https://u4ssc.itu.int/), the following new deliverables were published in July 2025:

– [Guidelines for cities to achieve carbon Net Zero through digital transformation](https://www.itu.int/net/epub/TSB/2025-Guidelines-for-cities-to-achieve-carbon-Net-Zero/index.html#p=1)

– [Methodology to assess Net Zero progress in cities](https://www.itu.int/net/epub/TSB/2025-Methodology-to-assess-Net-Zero-progress-in-cities/index.html).

**2.2.4** More than 200 cities worldwide are measuring their progress using “Key Performance Indicators for smart sustainable cities” based on ITU standards (ITU-T Y.4903). Additionally, the following city snapshots were launched: [Anyang (Republic of Korea)](https://www.itu.int/en/publications/Documents/tsb/2023-U4SSC-City-Snapshot-Anyang-Republic-of-Korea/index.html#p=1), [Canton of Geneva (Switzerland)](https://www.itu.int/en/publications/Documents/tsb/2022-U4SSC-State-Snapshot-Canton-of-Geneva-Switzerland/index.html#p=1), [Kyebi (Ghana)](https://www.itu.int/en/publications/Documents/tsb/2022-U4SSC-City-Snapshot-Kyebi-Ghana/index.html#p=1), [Tromsø](https://www.itu.int/en/publications/Documents/tsb/2022-U4SSC-City-Snapshot-Tromso-Norway/index.html) and [Narvik](https://www.itu.int/en/publications/Documents/tsb/2022-U4SSC-City-Snapshot-Narvik-Norway/index.html#p=1) (Norway), [Mashhad (Islamic Republic of Iran)](https://www.itu.int/en/publications/Documents/tsb/2021-U4SSC-City-Snapshot-Mashhad-Iran/index.html), [Larvik (Norway)](https://www.itu.int/en/publications/Documents/tsb/2021-U4SSC-City-Snapshot-Larvik-Norway/index.html#p=1), and [Daegu (Republic of Korea)](https://www.itu.int/en/publications/Documents/tsb/2021-U4SSC-City-Snapshot-Daegu-Republic-of-Korea/index.html#p=1). The following county snapshot was launched: [Møre og Romsdal (Norway)](https://www.itu.int/en/publications/Documents/tsb/2021-U4SSC-City-Snapshot-More-og-Romsdal-Norway/index.html#p=1). The following verification reports were launched: [Anyang (Republic of Korea)](https://www.itu.int/en/publications/Documents/tsb/2023-U4SSC-Verification-Report-Anyang-Republic-of-Korea/index.html#p=1); Canton of Geneva (Switzerland); Tromsø and Narvik (Norway); Mashhad (Islamic Republic of Iran); Larvik (Norway); Daegu (Republic of Korea).

**2.2.5** The first United for Smart Sustainable Cities (U4SSC) Austrian [U4SSC Country Hub](https://unnh.at/) was approved during the 6th U4SSC meeting and is hosted by the Austrian Economics Center in Vienna, Austria. The city of Kyebi, Ghana, has also set up a U4SSC Country Hub in Ghana, which is the first in Africa. The key objectives of the U4SSC country hubs are to promote the work of U4SSC.

**2.2.6** A [Toolkit on digital transformation for people-oriented cities and communities](https://toolkit-dt4c.itu.int/) has been developed to support cities and communities. The resources contained in this Toolkit include international standards and guidance, the latest research and projections, and cutting-edge reports on a variety of timely topics relevant to the digital transformation of cities and communities.

**2.2.7** A [Digital Transformation Resource Hub](https://www.itu.int/cities/dt-resource-hub/) was created in February 2023. The Digital Transformation Resource Hub provides a wide range of quality publications on digital transformation topics, including smart sustainable cities, cities’ actions to tackle COVID-19, artificial intelligence, Internet of Things, blockchain, digital twin, metaverse and digital transformation trends.

**2.2.8** The ITU, together with other organizations and UN agencies, has been organizing the [Digital Transformation Dialogues (DTD)](https://www.itu.int/cities/digitaltransformationdialogues/). DTD offer a dynamic platform to facilitate a deeper understanding of emerging technologies to reshape traditional processes, improve operational efficiency and unlock new possibilities for innovation and standardization. The Digital Transformation Dialogues seeks to address evolving themes associated with digital transformation, foster cooperation among city stakeholders, and examine the role of standardization within this domain. The Digital Transformation Dialogues serve as a unique platform for highlighting the latest work and outcomes of the ITU-T Focus Groups, Initiatives and ITU-T Study Groups.

**2.2.9** Throughout 2024, the ITU has consistently published the *Digital Transformation and Cities Digest*, with editions being released in [January](https://www.itu.int/cities/wp-content/uploads/2024/01/ITU-Digital-Transformation-and-Cities-Digest-Jan2024.html), [March](https://www.itu.int/cities/wp-content/uploads/2024/03/ITU-Digital-Transformation-and-Cities-Digest-Mar2024.htm), [May](https://www.itu.int/cities/wp-content/uploads/2024/05/ITU-Digital-Transformation-and-Cities-Digest-May2024.htm) and [July](https://www.itu.int/cities/wp-content/uploads/2024/07/ITU-Digital-Transformation-and-Cities-Digest-July2024.htm). Copies of the Digest are available for access on the [Digital Transformation and Cities Digest webpage](https://www.itu.int/cities/dt-digest/).

## 2.3 IP Cable

ITU-T SG16 approved the following two Recommendations in September 2024:

– Revised J.224, *Fifth-generation transmission systems for interactive cable television services – IP cable modems*

– Revised J.225, *Fourth-generation transmission systems for interactive cable television services – IP cable modems*.

## 2.4 IPTV, Content Delivery Networks (CDN) and Digital Signage

ITU-T SG21 approved Recommendation ITU-T F.740.9 on requirements for enabling VR services based on IPTV architecture.

## 2.5 IP performance

ITU-T SG11 approved the following Technical Report: QSTR.MPM-SRv6 on methods for performance monitoring of SRv6 network.

## 2.6 IP-based Cloud/edge computing and Big Data

ITU-T SGs 3, 11, 13 and 20 approved the following five Recommendations:

– Y.3659, *Big data driven networking – requirements, architecture and mechanism of application awareness*

– Y.3660, *Big data driven networking - Functional requirements and functional architecture of operation aspect for public network integrated non-public network service*

– Q.3722, *Signalling requirements of virtual Broadband Network Gateway (vBNG) for cloud access*

– Y.4509, *Functional architecture of AI-enabled device-edge-cloud collaborative services for IoT and smart city*

– Y.Suppl.86, Supplement to ITU-T Y.4471 – *Functional architecture of connected vehicle formation supporting based on edge computing*.

ITU-T SG21 consented Recommendation ITU-T F.748.58 Requirements and architectures of multimedia platform for digital human services using edge cloud.

ITU-T SGs 2, 5, 11, 13, 17, 20 and 21 have 80+ draft Recommendations on cloud/edge computing and 13 draft Recommendations on big data under development.

## 2.7 Distributed ledger technology (DLT)/blockchain

ITU-T SGs 13 and 17 approved three Recommendations and started approval of X.1284 – *Authentication framework based on one-time authentication key using distributed ledger technology*:

– X.1413, *Security controls for distributed ledger technology*

– X.1414, *Security requirements and framework of cross-chain service for DLT systems*

– Y.3087, *Self-controlled identity based on blockchain - Functional requirements and architecture*

– Y.3088, *Information-centric networking in networks beyond IMT-2020 - Requirements and functional framework to support distributed ledger technology*.

ITU-T SGs 2, 3, 11, 13, 17, 20 and 21 have 26 draft Recommendations on distributed ledger technology/blockchain under development.

## 2.8 Intelligent Transport System (ITS)

**2.8.1** ITU-T SGs 2 and 20 approved two Recommendations:

– M.3391, *Requirements for smart maintenance of telecommunications infrastructure based on unmanned aerial vehicles*

– Y.Suppl.86, Supplement to ITU-T Y.4471 – *Functional architecture of connected vehicle formation supporting based on edge computing.*

**2.8.2** ITU-T SGs 12 and 21 started approval of two Recommendations:

– P.1100, *Narrowband hands-free communication in motor vehicles*

– F.749.19, *Framework and requirements of the data sharing service platform for electric vehicle charging*

**2.8.3** ITU-T SGs 11, 12, 13, 15, 17, 20, and 21 have 41 draft Recommendations on ITS under development.

## 2.9 Quantum technologies

**2.9.1** ITU-T SGs 11, 13 and 17 have studied quantum technologies, esp. key distribution network (QKDN), since the last study period 2017-2021 and have approved 7 Recommendations in Y.3800-series and Q.4160-series (QKDN). X.1700-series (Quantum security) (see <https://www.itu.int/ITU-T/workprog/wp_search.aspx?isn_sp=8265&isn_status=-1,2&title=quantum&details=0&field=acdefghijo>) since WTSA-24.

**2.9.2** In this reporting period, ITU-T SG 13 approved the following Recommendations on QKDN:

– Y.3804, *Quantum key distribution networks – Control and management*

– Y.3827, *Quantum key distribution networks – Measurement methodology for QoS parameters*

– Y.3828, *Integration of quantum key distribution network and user network supporting end-to-end modern cryptography services – Requirements for quality-of-service assurance*

– Y.Suppl.89, *Analysis of Synchronization in Quantum Key Distribution Networks*.

**2.9.3** As part of the [International Year of Quantum](https://quantum2025.org/) (IYQ 2025), ITU and its partners launched a new initiative, [Quantum for Good](https://aiforgood.itu.int/quantum-for-good/), as a track of the [AI for Good Global Summit](https://aiforgood.itu.int/summit25/programme/) to harness quantum’s potential to accelerate progress in climate action, healthcare, cybersecurity, and digital inclusion, complementing AI in tackling global challenges.

## 2.10 Security

ITU-T SG17 approved 23 Recommendations since WTSA-24. In this reporting period, SG17 approved the following Recommendations, in addition to what’s reported above:

– X.1010, *Guidelines for security orchestration of service access process*

– X.1285, *OpenID Connect Core 1.0 - Errata Set 2*

– X.1646, *Security threats to be identified in the domain of security as a service*

– X.1650, *Security guidelines for serverless computing*.

## 2.11 ITU-T Focus Groups

Two ITU-T Focus Groups are still active:

– [ITU-T Focus Group on cost models for affordable data services](https://www.itu.int/en/ITU-T/focusgroups/cd) (FG-CD);

– [Focus Group on Artificial Intelligence Native for Telecommunication Networks (FG‑AINN)](https://www.itu.int/en/ITU-T/focusgroups/ainn/Pages/default.aspx).

**2.12** In the reporting period, TSB has not received reports or information concerning any incidents covered by WTSA Resolution 69 on non-discriminatory access and use of Internet resources (so far, there have been [37 incidents since 2009](https://www.itu.int/net/ITU-T/res69/secured/notifications.aspx)).

**2.13** ITU-D SG1 and SG2 continue their work on IP-related issues and have organised special sessions on IP broadband satellite connectivity, digital broadcasting, including hybrid technical solutions. Details can be found at: [ITU Development Study Groups](https://www.itu.int/itu-d/sites/studygroups/).

**2.14** BDT, in collaboration with Intelsat, is working together to connect 100 schools to broadband Internet, and the beneficiary countries include but are not limited to: Burundi, Cambodia, Central African Republic, Mongolia, Mexico, Niger, Nepal, Papua New Guinea; The Philippines, Laos, Timor Leste, Zambia, Zimbabwe.

Projects have been implemented successfully by BDT on Internet broadband wireless connectivity to provide free or low-cost digital access for schools and hospitals, and for underserved populations in rural and remote areas in selected countries. The impact on the countries where projects have been implemented includes, but is not limited to:

– Burundi: 10 cities connected in the 2.5 GHz frequency band, 15 engineers trained for operations and maintenance, and 437 schools, hospitals and Government agencies connected.

– Djibouti: 20 cities connected in the 2.5 GHz frequency band, and 48 schools, 43 hospitals/clinics and 23 Ministries connected.

– Eswatini: 4G LTE Broadband Wireless Network installed in 10 sites and 15 technical training sessions completed for local experts on the RF Monitoring and Planning and Operation and Maintenance of the deployed 4G LTE Broadband Wireless Network.

Other initiatives are also ongoing related to this subject such as GIGA and Partner2Connect. More information is available in Document [C24/35](https://www.itu.int/md/S24-CL-C-0035/en).

**2.15** ITU-R approved Recommendation ITU-R M.2083-0 on IMT-Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond, Resolutions ITU-‑R 65 on principles for the process of future development of IMT for 2020 and beyond and ITU-‑R 66 on studies related to wireless systems and applications for the development of the Internet of Things, and Report ITU-R M.2440-0 on the use of the terrestrial component of International Mobile Telecommunications for narrowband and broadband machine-type communications.

**2.16** Several training courses will be provided this year through the [ITU Academy](https://academy.itu.int/) and the [ITU Academy Training Centers](https://academy.itu.int/itu-d/projects-activities/centres-excellence/coe-overview), covering topics such as “Future fixed and mobile broadband internet”, “IoT essentials: architecture, applications and security”, and “Key aspects and governance of Internet of Things, big data and artificial intelligence”.

# 3 IPv6

**3.1** The [ITU-T IPv6 webpage](https://www.itu.int/en/ITU-T/ipv6/Pages/default.aspx) highlights the IPv6 activities within ITU-T, including [approved](https://www.itu.int/ITU-T/workprog/wp_search.aspx?isn_sp=-1&isn_status=-1%2c2&title=IPv6&details=0&field=aebcgfkjl) and [under development](https://www.itu.int/ITU-T/workprog/wp_search.aspx?isn_sp=-1&isn_status=-1%2c1&title=IPv6&pg_size=100&details=0&field=aebcgfkjl) ITU-T deliverable related to IPv6. Trainings/courses are being organized on all forms of IoT connectivity, including information security and privacy.

**3.2** BDT and Telecommunications and Post Regulatory Authority of Sudan are operating a regional “ITU IPv6 and IoT Expertise Center for Arab Region” hosted by TPRA-Sudan to [provide trainings](https://www.itu.int/en/ITU-D/Regional-Presence/ArabStates/Pages/Projects/IPv6%26IoT/IPV6-IOT.aspx).

**3.3** BDT is also providing technical assistance on IPv6 to Montenegro. The IPv6 Laboratory is operational at the University of Montenegro. Capacity-building programs are taking place to train students and operators at this newly established IPv6 Laboratory.

**3.4** BDT is providing assistance on IPv6 test bed implementation in Cameroon and in Congo. Technical assistance is being provided to Iraq, State of Palestine, Somalia, and Sudan for developing their national IPv6 transition strategies and the creation of national IPv6 task forces.

**3.5** BDT is also focusing on a special program to train the trainers on “IPv6 Over 5G Networks”.

**3.6** The [final report](https://www.itu.int/pub/D-STG-SG01.01.1-2017) in response to ITU-D SG1 [Question 1/1](https://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ01.1&stg=1) is available and explores through case studies the experiences of countries in transitioning from IPv4 to IPv6. An [essential Guide](https://www.itu.int/en/ITU-D/Study-Groups/2018-2021/Pages/Publications.aspx) is available in order to assist developing countries in implementing IPv6 over 5G Networks.

# 4 Internet-related public policy issues, including the management of domain names and addresses

**4.1** Pursuant to the twenty-first meeting of the CWG-Internet, ITU launched an open consultation on [Ensuring meaningful connectivity to the Internet for landlocked developing countries (LLDCs)](https://www.itu.int/en/council/cwg-internet/Pages/consultation-mar2025.aspx) in March 2025.

**4.2** ITU participated in the 20th IGF meeting in Oslo, Norway, on 23-27 June 2025, including the opening ceremony. ITU also organized several sessions, including on the WSIS+20 process, WSIS Forum 2025 Open Consultation, and the CWG-Internet.

**4.3** ITU continues to follow the issue of protecting IGO names and acronyms in any new gTLDs, as part of the IGO coalition composed of 35 IGOs including OECD, UN, UPU, WHO, WIPO, and the World Bank.

**4.4** In allthe activities listed in the various sections of this Report, particularly with regard to beneficiary countries on IPv6, broadband, and capacity-building activities, ITU aims to address the challenges faced by landlocked developing countries as per the Vienna Programme of Action.

**4.5** ITU continues to actively follow discussions in ICANN GAC as an observer.

**4.6** ITU has also been following and contributing to the ongoing Global Digital Compact process. More information on this is contained in Document [CWG-WSIS&SDG-43/12](https://www.itu.int/md/S25-CWGWSIS43-C-0012/en).

# 5 ENUM

[Updated Information on ENUM](http://www.itu.int/ITU-T/inr/enum/) is being maintained by ITU-T. ITU-T SG2 experts have noted that a number of countries have stale delegates (i.e., either not functioning due to technical reasons, or not registered in the RIPE database), and are discussing the expected usefulness of ENUM delegation of E.164 Geographic Country Codes in the future.

# 6 International Internet Connectivity (IIC)/Internet Exchange Points (IXPs)

BDT continues its work on providing assistance on IXP-related issues. Assistance was provided to the Armenian Government and industry to help the ARMIX to analyse data on IXP performance, with the following results:

– Good peering efficiency was found in terms of the number of network addresses peering with the Internet Exchange Point

– Mobile network performance above regional peers assessed (average 33.13 Mbps down, 19.83 Mbps up).

Internet Exchange Points locations are available at the ICT Infrastructure interactive mapping: <https://bbmaps.itu.int/bbmaps/>.

# 7 OTT

**7.1** Under ITU-D Q3/1, work continues on the use of telecommunications/ICTs for disaster risk reduction and management.

**7.2** ITU-T SG2 is progressing with two work items on OTTs (TR.OTTnum “Current use of E.164 numbers as identifiers for OTTs”, and TR.OTTNumMgt “OTT numbering management”).

**7.3** ITU-T SG3 approved [Regional Recommendation ITU-T D.608R “OTT voice bypass”](https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14772) (Africa region) and [Regional Recommendation ITU-T D.700R “Principles for dealing with OTTs”](https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=15576) (Arab region). SG3 also agreed on [ITU-T Technical Report DSTR-OTTBypass “OTT Bypass”](https://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=18200) (under publication) and [ITU-T Technical Report DSTR-STUDY\_DRCI “Dispute Resolution Processes”](https://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=18168) between traditional telecommunication services providers and over-the-top (OTT) providers.

ITU-T SG3 is currently working on:

– [D.GuidelinesCostContribution](https://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=21323);

– D.OTTBypass: [Recommendation on “OTT Bypass”](https://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=21335);

– TR\_OTTReporting: [Establishing International Reporting Standards for OTT Applications](https://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=21324); and

– [Study on “Policy, regulatory, and economic aspects of OTTs in the context of international telecommunication/ICT services and networks”](https://www.itu.int/ITU-T/workprog/wp_item.aspx?isn=18579).

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