

DRAFT

ITU World Telecommunication Standardization Assembly 2024

Background Paper, July 2024

This draft background paper on the World Telecommunication Standardization Assembly (WTSA) is intended to provide the Internet Society community and interested parties with an outline of the objectives and key issues to be addressed at WTSA 2024.

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The final version of this background paper will be published before WTSA-24, along with the ITU World Telecommunication Standardization Assembly 2024 Issues Matrix.



Background on the International Telecommunication Union (ITU)

The ITU was established in 1865 to facilitate international telegraphy in Europe and has evolved to address global communications advances. Since 1948, it has been a United Nations (UN) specialized agency headquartered in Geneva, Switzerland, and has played an important role in forging cooperation in the global communications system, telecommunications infrastructure development, and the allocation of radio frequency spectrum.

As stated in Article 1 of the ITU Constitution, the ITU's mandate is focused on international telecommunications. However, innovation in communication technologies and applications and the supplanting of traditional telephony systems by global Internet protocol networking systems have raised questions about the ITU's appropriate role. As Internet public policy issues have found their way into the ITU agenda, discussions continue about the ITU's proper role, scope, and activities.

ITU Structure and Governing Bodies

The Plenipotentiary Conference (Plenipot), held every four years, acts as the governing body of the ITU, providing its overall strategic and financial guidance. The Plenipotentiary establishes the General Rules of Conferences, Assemblies, and Meetings of the Union and elects leadership for the ITU. As a treaty-level conference, the Plenipotentiary Conference is the venue for revising the ITU's controlling treaties, the Constitution of the International Telecommunication Union (ITU Constitution), and the Convention of the International Telecommunication Union (ITU Convention).

Since 1998, the ITU has become more involved in a range of policy and substantive matters related to Information and Communication Technologies (ICTs). Plenipotentiary Resolutions have largely been the vehicle for its enhanced role.

The ITU Council meets annually and serves as the governing body during the intervening years between Plenipotentiary conferences. It is composed of one-fourth of the ITU's Member States, and Council Members are elected at Plenipotentiary Conferences. The ITU Council addresses decisions that do not involve changing treaty text or elections.

The ITU is managed by its General Secretariat, headed by the Secretary-General (currently Doreen Bogden of the USA). The ITU includes three Sectors that carry out the activities mandated by the Plenipotentiary Conference: The Radiocommunication Sector (ITU-R), the Telecommunication Standardization Sector (ITU-T), and the Telecommunication Development Sector (ITU-D). The Sector work programs are defined by a Sector-specific assembly or conference usually held every four years (see Table 1).

Table 1 – Description of International Telecommunication Union Sectors

Item	ITU-R	ITU-T	ITU-D
Sector	Radiocommunication	Telecommunication Standardization	Telecommunication Development
Mandate	Coordinate the allocation of Radio Frequency Spectrum and adopt Radiocommunication Recommendations <i>(Art. 13 ITU Constitution)</i>	Study technical, operating and tariff questions and adopt recommendations to standardize telecommunications <i>(Art. 17 ITU Constitution)</i>	Facilitate and improve telecommunications development <i>(Art. 21 ITU Constitution)</i>
Conference/ Assembly	World Radio Conference (WRC)	World Telecommunications Standardization Assembly (WTSA)	World Telecommunications Development Conference (WTDC)
Description	Considers revisions to the ITU Radio Regulations	Defines the Work Program, Working Methods and Structure of Study Groups for the next four years in ITU-T	Defines the Work Program, Working Methods and Structure of Study Groups for the next four years in ITU-D
Occurrence	Every 3–4 years	Every 4 years	Every 4 years
Next Conference	2027	WTSA 2024	WTDC 2025

The ITU's membership is comprised of Member States, Sector Members (private industry and other approved organizations), Associates, and Academia. As a UN-specialized agency, only Member States have voting rights. Sector Members participate in ITU conferences and assemblies as observers.

There are 193 Member States and over 700 Sector Members and Associates. Membership in the ITU is fee-based, with some fee reductions or exemptions available to members who meet the ITU's eligibility criteria. Sector Members may participate in the activities of the Sector they join, including leadership positions in the Sector Study Groups and Sector Conferences. Associates participate in only one Study Group in a Sector. Each Sector has rules of procedure for decision-making in Study Groups.

The ITU-T is the ITU sector that develops international ICT standards in the form of Recommendations. It is managed by the Telecommunications Standardization Bureau (TSB), which is headed by the [TSB Director](#) (currently Seizo Onoe of Japan).

The standardization work of the ITU-T is carried out in its Study Groups (see Table 2) organized as [Questions](#). The Telecommunication Standardization Advisory Group ([TSAG](#)) acts "as an advisory body to

the Study Groups, membership, and staff of ITU-T.” TSAG also develops its own recommendations ([A-series](#)): concerning the operation of the Study Groups, the approval process, and how the ITU-T works with other organizations (for example, IETF, ISO/IEC).

Table 2 – ITU study groups

Study Group Number	Study Group Name
SG2	Operational aspects
SG3	Economic and policy issues
SG5	Environment, EMF and circular economy
SG9	Broadband cable and TV
SG11	Protocols, testing and combating counterfeiting
SG12	Performance, QoS and Qen
SG13	Future networks
SG15	Transport, access and home
SG16	Multimedia and digital technologies
SG17	Security
SG20	IoT, smart cities and communities

The ITU-T also creates [Focus Groups](#), which provide a way for ITU-T to collaborate with non-ITU organizations to address specific issues. While Focus Groups meet for a limited time and don’t develop standards, their reports can be used to initiate standards work in the Study Groups.

The World Telecommunication Standardization Assembly (WTSA)

The 2024 World Telecommunication Standardization Assembly ([WTSA-24](#)) will define the work program, working methods, and structure of Study Groups for the ITU-T for the 2025–2029 study period and will be held 15-24 October 2024 in New Delhi, India. The activities of WTSA are outlined under Article 13 of the ITU Convention. During a WTSA, governments:

- Consider Study Group reports in order to approve, modify or reject draft recommendations
- Consider proposals to retain, dissolve, modify or merge Study Groups and their questions
- Consider proposals to add new Study Groups and Questions that reflect new issues or priorities

- Consider proposals to add, merge, retain, or dissolve other groups
- Agree on the mandate, scope, and terms of reference for Study Group work programs (found in WTSA Resolution 2)
- Review proposals to modify or delete WTSA-20 Resolutions or add new resolutions
- Elect Chairs and Vice-Chairs of the Study Groups
- Consider other policy matters.

ITU-T Recommendations are developed by the Study Groups, are consensus-based (with some exceptions), and non-obligatory, following the procedures defined in WTSA Resolution 1. A Recommendation that has not reached consensus in the Study Groups can be proposed for adoption at WTSA by a majority vote of Member States.

Despite their international voluntary status, Member States can adopt Recommendations into national laws or regulations, thus making them mandatory within those countries.

Global Standards Symposium

The ITU-T will host the Global Standards Symposium (GSS) the day before WTSA-24 starts (14 October 2024). The GSS is a “high-level forum for discussion and coordination” on standards development and is open to ITU-T members and non-members.

This year’s GSS theme is “Charting the Next Digital Wave: Emerging Technologies, Innovation, and International Standards.”

Preparations for WTSA-24

The work program in ITU-T is organized and structured according to the WTSA Resolutions contained in the final WTSA proceedings. During WTSA-24, Member States will consider reports from the Director of the TSB, the Study Groups, and the TSAG on activities from the previous study period (2020—2024).

Through 2024, the Study Groups will hold their wrap-up meetings for the study period and develop their final reports for WTSA-24. The Study Group reports include proposals for:

- Updating the mandate and terms of Reference for the Study Group.
- Adding, modifying, merging, or deleting Questions for the new study period.
- Approving draft Recommendations.
- Modifying Resolutions within the scope of work of the Study Group.

Most of the decisions on updates to the Study Group work plan and Questions are made at the Study Group level and are generally approved at WTSA. Topics on which agreement can’t be reached can be flagged for further discussion at WTSA. The Study Group reports are submitted to TSAG for review before being submitted to WTSA.

The TSAG will meet in late July/early August 2024 to review the TSB Director report and the Study Group reports and develop its own input to WTSA-24 related to its Recommendations (A-series), including the structure of the Study Groups and Resolutions.

The ITU regional telecommunication organizations meet in the months before WTSA-24 to prepare and consolidate regional views on issues important to each region and develop common regional proposals for WTSA-24 (see Table 3). Since regional proposals have already reached a level of consensus within the regions, they are given priority in discussions at WTSA. In addition, ITU will host inter-regional meetings to allow the regions to present the status of their preparations for WTSA-24.

Table 3 – Regional WTSA 2024 Preparatory Meetings

ITU Regional Telecommunication Organization	Meeting Dates
African Telecommunication Union (ATU)	12–16 August 2024
Inter-American Telecommunication Commission (CITEL)	19–23 August 2024
Asia Pacific Telecommunity (APT)	25–28 June 2024 19–23 August 2024
League of Arab States (AST)	25 July 2024
European Conference of Postal and Telecommunication Administrations (CEPT)	23 July 2024, 3–5 September 2024
Regional Commonwealth in the Field of Communications (RCC)	August 2024
Inter-regional Meeting for WTSA-24 Preparation (IRM)	25 July 2024
Telecommunication Standardization Advisor Group (TSAG)	29 July to 2 August 2024

Each Member State will prepare for WTSA-24 using its national process. In addition to working with its regional group, Member States can also prepare their own proposals.

[Resolution 2](#) contains the mandates and terms of reference for the Study Groups and the Questions for study during the study period.

Key Topics at WTSA-24

WTSA-24 will set the direction of ITU-T and its work program for the next four years. How the work program is defined, as well as the changes made in Recommendations and WTSA Resolutions, can impact the scope of ITU-T's mandate.

The growth of the Internet and widespread use of its protocols and services have been reflected in the work program of ITU-T over the last 25 years, so many of its study topics can be seen as directly or indirectly affecting the Internet.

Some of the topics that could affect the Internet and that are likely to be discussed at WTSA-24 include:

- International Mobile Telecommunications towards 2030 (IMT-2030) and beyond (updating previous work topics of “IMT-2020 and beyond”): ITU-R has published Recommendation M.2160-0 “Framework and overall objectives of the future development of IMT for 2030 and beyond” and Report ITU-R M.2516-0 “Future technology trends of terrestrial International Mobile Telecommunications systems towards 2030 and beyond”. ITU-T focuses on the non-radio aspects of IMT. Current resolutions (for example, Resolution 92) that reference IMT-2020 will probably be updated to reflect IMT-2030. IMT-2030 will be used to drive work on several technologies, including SG13 for network architecture, SG11 for network signaling, and SG17 for security, including:
 - Voice/Video over New Radio (VoNR/ViNR), sometimes referred to as Voice over 5G, to replace Voice over LTE (VoLTE).
 - Immersive and ubiquitous real-time communications.
 - Deterministic networking.
 - Ambient Internet of Things (IoT).
 - Fixed, mobile, and satellite convergence (FMSC).
 - Integrated sensing and communication.
 - Digital twin.
 - Intelligent manufacturing, Industrial Internet networking.
 - Vehicle-to-Everything.
 - Web 3.0/emerging Web, including semantic networking.
 - Open Radio Access Networks (O-RAN).
 - Coordination of networking and computing (CNC), computing power network
 - “AI Native” where Artificial Intelligence (AI) is embedded in networking equipment.
- Emerging Technologies: In addition to the above, other emerging technologies will possibly be discussed. Some of the new work (for example, AI) mentioned above will also be done outside the IMT-2030 project. This includes:
 - Artificial Intelligence (AI)/Machine Learning (ML): Includes applications of AI to enhance network operation, use of AI to provide enhanced services, responsible use of AI.
 - Quantum communication technologies (for example, Quantum Key Distribution).
 - Blockchain/distributed ledger technologies (DLT).
 - Metaverse: There is likely to be a new resolution proposed. From FG-MV: “An integrative ecosystem of virtual worlds offering immersive experiences to users, that modify pre-

existing and create new value from economic, environmental, social and cultural perspectives.”

- Citiverse: From FG-MV: “Application of metaverse in urban spaces and populations”.
 - Green Networking, Environmental Sustainability, energy efficiency (for example, SG5), energy management.
 - Extended Reality (XR) including augmented and virtual reality.
 - Autonomous networking.
- Internet of Things and Smart Communities.
- Cybersecurity (Resolution 50) continues to be a hot topic of debate in ITU, as exemplified by the debate in Plenipotentiary 2022 (PP-22) on Resolution 130. The work in Study Group 17 continues to expand to cover new areas (for example, listed above) and software supply chain security.
- Identifier Technologies: Work on Identifier technologies include the Internet of Things, Digital Object Identifiers (DOIs), the Digital Object Architecture (DOA), Identity Management (SG17), naming, numbering, addressing, and identification (Study Group 2), Policy Frameworks (Study Group 3), Unified identity/identifier/locator split (UIIS) (Study Group 20). Possible new proposals include a new resolution on digital identities.
- Over-the-Top Communications (OTT) (including content delivery networks): Policy discussions continue in Study Group 3 and will be the topic of proposals for WTSA-24, including possibly adding OTT to Resolution 20.
- Satellite Internet connectivity (Study Group 3) mainly focused on policy issues related to connecting to the Internet via Satellite.
- Mobile Financial and Banking services: Continuation of work on mobile financial and banking; conformance and interoperability; security and trust; Digital Currency.
- Mobile Roaming: Studies on Costs, termination fees, and regulatory models, including voice and data roaming, will continue.
- ITU-T Reorganization: Member States will debate the organization of Study Groups in ITU-T. Some of the goals of the Study Group structure include keeping related work items and communities of interest together, minimizing travel for participants, and efficiency of operations. There is a current proposal on the table to merge Study Group 9 and Study Group 16.
- Engagement in ITU-T: Industry engagement is likely to be a topic of discussion at WTSA-24, with proposals to modify Resolutions 22 and 68. In addition, there will possibly be a proposed Resolution on enhancing next generation participation in ITU-T standardization to encourage participation from developing countries and youth.
- TSAG (via its Rapporteur Group on Digital Transformation) has developed a draft new Resolution WTSA on digital transformation.

Table 4 lists the WTSA Resolutions that the Internet Society is tracking for WTSA-24.

Table 4 – WTSA Internet related resolutions.

Issue Area	WTSA Resolutions	Title
ITU-T Study Group Mandates	Resolution 2	ITU Telecommunication Standardization Sector Study Group responsibility and mandates.
Internet-related issues	Resolution 20	Procedure for allocation and management of international telecommunication numbering, naming, addressing and identification resources.
	Resolution 29	Alternative calling procedures on international telecommunication.
	Resolution 47 (WTSA-12)	Country code top-level domain names.
	Resolution 48	Internationalized (multilingual) domain names telecommunication.
	Resolution 49 (WTSA-16)	ENUM
	Resolution 60	Responding to the challenges of the evolution of the identification/numbering system and its convergence with Internet Protocol-based systems/networks.
	Resolution 61	Countering and combating misappropriation and misuse of international telecommunication numbering resources.
	Resolution 64	IP Address allocation and encouraging the deployment of IPv6.
	Resolution 69 (WTSA-16)	Non-discriminatory access and use of Internet resources.
ITU-T's role in standardization	Resolution 44	Bridging the standardization gap between developing and developed countries.
Cybersecurity, Confidence and security in the use of ICTs	Resolution 50	Cybersecurity
	Resolution 52 (WTSA-16)	Countering and combating spam
	Resolution 58	Encouraging the creation of national computer incident response teams particularly for developing countries.
WSIS+10 and SDGs	Resolution 75	The ITU Telecommunication Standardization Sector's contribution in implementing the outcomes of the World

Issue Area	WTSA Resolutions	Title
		Summit on the Information Society, considering the 2030 Agenda for Sustainable Development.
Access and Infrastructure	Resolution 92	Enhancing the standardization activities in the ITU Telecommunication Standardization Sector related to non-radio aspects of international mobile telecommunications.
	Resolution 93 (WTSA-16)	Interconnection of 4G, IMT-2020 networks and beyond.
	Resolution 95	ITU Telecommunication Standardization Sector initiatives to raise awareness on best practices and policies related to service quality.
Emerging Technologies	Resolution 97	Combating mobile telecommunication device theft.
	Resolution 98	Enhancing the standardization of Internet of Things and smart cities and communities for global development.

Internet Society's Role at WTSA

The Internet Society is a Sector Member of ITU-T and ITU-D and believes that the ITU has an important role to play in the Internet Ecosystem: promoting core infrastructure development and cross-border connectivity, allocating spectrum to enable the deployment of new technologies and services, and providing technical assistance and capacity building.

The Internet Society supports the ITU's role in creating an enabling environment and its international cooperation platform for telecommunications. Additionally, the Internet Society will engage in discussions and follow activities related to the Internet's technical, social, and economic development while continuing to urge that multistakeholder dialogue occur on these issues and that technical recommendations take into consideration Open Standards.

As a note, the Internet Society recognizes and values the importance of a distributed model of governance where each stakeholder group has its own role and responsibility in the Internet Ecosystem. These elements are key considerations to achieving successful outcomes at WTSA-24 whereby the ITU's role is clearly delineated within scope and mandate, and the ITU's commitment to collaboration with other Standards Development Organizations is deepened.

The Internet Society would like to encourage community members, including chapters, organizational members, and individuals, to actively participate in the WTSA-24 preparatory activities at the national and regional levels. Engagement could be as Sector Members or as members of the national delegations.

Community members are welcome to [share observations](#) on Internet-related draft resolutions with the Internet Society.

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