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|  | **Document TDAG17-22/21-E**  |
|  | **10 May 2017** |
|  | **Original: English** |
| Chairman, Inter-Sector Coordination Team on Issues of Mutual Interest |
| PROGRESS REPORT BY THE CHAIRMAN OF THE INTER-SECTOR COORDINATION TEAM ON ISSUES OF MUTUAL INTEREST |
|  |
| **Summary:**This document reports on inter-Sectoral coordination activities that have been undertaken in the Sector advisory groups since the last TDAG meeting in March 2016.**Action required:**TDAG is invited to note this document and to provide guidance as deemed appropriate.**References:**[TDAG16-21/12](https://www.itu.int/md/D14-TDAG21-C-0012/en), [Report of TDAG 2016](https://www.itu.int/md/D14-TDAG21-C-0043/en), [Report of RAG 2016](https://www.itu.int/md/R00-CA-CIR-0229/en), [Report of TSAG July 2016](https://www.itu.int/md/T13-TSAG-R-0008/en), [Resolution 18 (Rev. Hammamet, 2016)](http://www.itu.int/pub/T-RES-T.18-2016),[TDAG17-22/35](https://www.itu.int/md/D14-TDAG22-C-0035/en), [TDAG17-22/36](https://www.itu.int/md/D14-TDAG22-C-0036/en), [TDAG17-22/37](https://www.itu.int/md/D14-TDAG22-C-0037/en), [TDAG17-22/51](https://www.itu.int/md/D14-TDAG22-C-0051/en),[TDAG17-22/58](https://www.itu.int/md/D14-TDAG22-C-0058/en), [ISCT/9-E](https://www.itu.int/en/ITU-D/Conferences/TDAG/Pages/ISCT_Documents.aspx) |

Introduction

In March 2016, the Inter-Sector Coordination Team on Issues of Mutual Interest met and approved its terms of reference as revised by all three Sector advisory groups – Radiocommunication Advisory Group (RAG), Telecommunication Standardization Advisory Group (TSAG) and Telecommunication Development Advisory Group (TDAG). The Team appointed Mr Fabio Bigi (Italy) as its Chairman, developed a list of proposed areas of mutual interest based on input from the three advisory groups and nominated TSAG representatives. The Team also welcomed a new electronic calendar covering the years 2016, 2017, 2018 and 2019 developed by BDT to facilitate collaboration and coordination of various meetings and events of the ITU Sectors.

1. Meetings of the Sector advisory groups

In the period since the last TDAG meeting in March 2016, RAG and TSAG met as follows:

* RAG, Geneva, 10-13 May 2016; 26-28 April 2017.
* TSAG, Geneva, 18-22 July 2016; 1-4 May 2017.

The report of the RAG 2016 meeting is available at <https://www.itu.int/md/R00-CA-CIR-0229/en> and that of the TSAG July 2016 meeting at <https://www.itu.int/md/T13-TSAG-R-0008/en>.

At its May 2016 meeting, RAG noted the liaison statements from TSAG and TDAG on inter-sector coordination, as well as the reports from the Chairman of the Inter-Sector Coordination Team on Issues of Mutual Interest and Professor Vladimir Minkin (Russian Federation), Chairman of TDAG. RAG expressed its appreciation for the detailed reports and confirmed its commitment to continue participating in the work of the Inter-Sector Coordination Team on Issues of Mutual Interest.

In a liaison statement approved at RAG’s 24th meeting on 26-28 April 2017 (see Document TDAG17-22/51-E), RAG brought to the attention of TDAG its views concerning possible improvements on cooperation and coordination between ITU-R and ITU-D on WTDC Resolution 9 (Rev. Dubai, 2014).

In particular, RAG has expressed the view that the concerns of ITU-R on the draft report to WTDC-17 in response to Resolution 9 (Rev. Dubai, 2014) should be taken into account before the report is published and considered by WTDC-17. RAG also informed TDAG that ITU-R Study Group 1 meeting in June 2017 offers a good opportunity to fully reflect ITU-R’s comments in the report.

At its July 2016 meeting TSAG, through its Rapporteur Group on “Strengthening Collaboration” (WTSA Resolution 81) and its sub-group on Intra-ITU Collaboration and Coordination, thanked TDAG for its liaison statement in [TDAG - TDAG16-21/LS/1](http://handle.itu.int/11.1002/ls/sp15-tdag-iLS-00002.zip). TSAG expressed its appreciation for the efforts made to develop a mechanism to strengthen cooperation and joint activity such as the yearly event calendar tool, and jointly organized events and studies. TSAG welcomed the fact that TDAG had approved the terms of reference of the Inter-Sector Coordination Team on Issues of Mutual Interest and that the team had begun with its important activity on the listed areas of mutual interest. TSAG stated that it looked forward to future coordination and cooperation between TDAG and RAG on areas of mutual interest.

At its recent meeting on 1-4 May 2017, TSAG approved a liaison statement on inter-Sector coordination announcing that it had finalized compiling the mapping of work areas of common interest between ITU-D and ITU-T study groups and between ITU-R and ITU-T study groups.

TSAG, through its Rapporteur Group on “Strengthening Collaboration”, thanks all who reviewed its former material on ITU inter-Sector coordination, and on candidate topics on working methods for ITU inter-Sector coordination. TSAG acknowledged the very valuable feedback it had received, adding that it had accepted all amendments and updated the mapping material accordingly.

The Inter-Sector Coordination Team on Issues of Mutual Interest had also been requested to review the mappings and to provide TSAG with any further comments. The mappings are given in the following two attachments:

* Attachment 1 – Matching of ITU-D SG 1 and 2 Questions of interest to ITU-T study groups.
* Attachment 2 – Matching of ITU-R WPs of interest to ITU-T study groups.

TSAG will continue to examine existing methods and approaches to collaboration and/or cooperation with other Sectors, with a view to enhancing collaboration of ITU-T and other organizations in a reciprocal manner based on mutual respect.

TSAG added the issue of handling liaison statements of Inter-Sector Rapporteur Groups to the list of candidate topics on working methods for ITU inter-Sector coordination (see Annex to Document TDAG17-22/58-E). The Inter-Sector Coordination Team on Issues of Mutual Interest was invited to provide its feedback on the added candidate topics in that annex and any other suggestions that would improve the collaboration and cooperation between ITU Sectors. The Team’s feedback is reflected in Annex 1.

Two liaison statements were also noted from the ITU-T Joint Coordination Activity on Accessibility and Human Factors (JCA-AHF). One liaison statement informs TDAG that the terms of reference for JCA-AHF were modified by TSAG in July 2016 mainly updating the list of resolutions, groups and documents. The other encourages entities to contribute to the ITU Accessibility Fund. Contributions to the Fund have been used to finance a number of BDT activities, including a mobile app competition in the Americas region to encourage accessible mobile apps.

**2. WTSA-16**

Since the last TDAG meeting, the World Telecommunication Standardization Assembly (WTSA-16) had taken place in Yasmine Hammamet, Tunisia, from 25 October to 3 November 2016. A summary of the outcomes of WTSA-16 that relate to the work of ITU-D are provided in Document TDAG17-22/5.

Among the topics that touch upon key areas of the work of ITU-D, as approved by WTSA-16 in several resolutions, are the mandate of the ITU study groups, Internet of Things, over-the-top services, cybersecurity, International Mobile Roaming (IMR), bridging the financial inclusion gap, counterfeit, Smart Africa, bridging the standardization gap, IPv6, accessibility, human exposure to electromagnetic fields and e-health. Resolutions in these areas require ITU-D to provide assistance to Member States, with a focus on developing countries mostly in the form of raising awareness, organizing workshops and seminars as well as establishing platforms for dialogue and human and institutional capacity building.

In particular, Resolution 18 (Rev. Hammamet, 2016) on principles and procedures for the allocation of work to, and strengthening coordination and cooperation among, ITU-R, ITU-T and ITU-D invites RAG, TSAG and TDAG to continue to assist the Inter-Sector Coordination Team on Issues of Mutual Interest in identifying subjects common to the three Sectors and mechanisms for these Sectors to enhance cooperation and collaboration on matters of mutual interest.

Resolution 18 also invites the Directors of the Radiocommunication (BR), Telecommunication Standardization (TSB) and Telecommunication Development (BDT) Bureaux and the Inter-Sector Coordination Task Force (ISC-TF) to report to the Inter-Sector Coordination Team on Issues of Mutual Interest and to the respective Sector advisory groups on options for improving cooperation at the secretariat level to ensure that close coordination is maximized.

The Inter-Sector Coordination Task Force’s input in Document ISCT/9 presents its recent achievements in the following areas of inter-sectoral interest which it is coordinating: climate change, emergency telecommunications, accessibility, communications and Web editorial, resource mobilization, gender, Events Coordination, and Bridging the Standards Gap.

**3. Efforts for collaboration and coordination among Sectors**

**3.1. Mechanism to strengthen cooperation and joint activity**

The electronic calendar of events developed by BDT for 2017, 2018, 2019 and 2020 is facilitating collaboration and coordination of various meetings and events of the ITU Sectors.

These yearly event calendars are available to members on the [TDAG homepage](http://www.itu.int/en/ITU-D/Conferences/TDAG/Pages/default.aspx) and are updated regularly. These calendars are in a printer-friendly format (see **Annex 2** for current versions).

Thanks to this new mechanism, a number of events of the different Sectors have been organized jointly since the last TDAG meeting.

The Task Force is requested to consider the possibility of having a single calendar of all ITU events that is to be accessible on the main ITU web page.

**3.2 Studies and events jointly organized by ITU Sectors**

**3.2.1 Work of ITU-D Study Group 2 Question 9/2 contributing to enhancing collaboration with the other Sectors and the General Secretariat**

Initiated by ITU-D Study Group 2 Question 9/2 (Identification of study topics in the ITU-T and ITU-R study groups which are of particular interest to developing countries), a “Global survey on the work of ITU-D Study Groups” was sent to the appointed focal points in ITU Member States, Sector Members, Associates, Academia and members of the ITU-D Study Group 1 and 2 Management Teams, through a Circular Letter in November 2016 ([BDT/IP/CSTG-14](http://www.itu.int/md/D14-CA-CIR-0014) available in six languages). The aim of the survey was primarily to gather feedback on the usefulness of the outputs of ITU-D Study Group 1 and 2 studies, understand the relevance of the topics under study, and seek input for future priority areas. When the survey was closed on 1 February 2017, some 40 responses had been received from representatives in ministries, regulators, private-sector members, regional and international organizations as well as academic institutions.

As this survey was initiated by ITU-D Study Group 2 Question 9/2, the survey respondents were asked specific questions related to the work of this Question. The respondents noted that the work of Question 9/2 provides developing countries with reports and updates concerning the recent activities and events that are conducted by ITU-T and ITU-R. Around 52 per cent of the respondents indicated that they benefitted from, and found, the information and presentations provided by ITU-T and ITU-R study groups during Question 9/2 meetings throughout the study period useful. As many of the administrations and Sector Members may not have direct access to ITU-T and ITU-R activities or their participation in these activities is low, providing the major highlights and relevant outcomes from ITU-R and ITU-T through ITU-D study groups is useful.

It was suggested that as the matter is very important it should not be treated as a study Question, but instead as a coordination activity. It was further noted that all topics are relevant for the countries. One respondent highlighted the need for Member States to have their own direct participation in ITU-R and ITU-T and that ITU-D should encourage such participation instead of having a study Question for this. If Question 9/2 is to be continued in the next study period, in order to make its outcomes even more relevant to the membership, the Question should also include the work of the ITU General Secretariat and bring the Question beyond ITU-D Study Group 2.

**3.2.2 Events organized by BDT, TSB and BR in cooperation with other bodies and with the support of the ITU Regional Offices**

* **An ITU Workshop on "Digital Financial Services and Financial Inclusion", held at ITU headquarters in Geneva on 8 December 2016,** and organized by TSB brought together ITU Member States, ICT regulators, financial services regulators, policy-makers, mobile network operators, banks, financial service providers, mobile financial services platform providers, international organizations, NGOs involved in financial inclusion programmes and Academia. The workshop was preceded by **the 7th and final meeting of the** **ITU-T Focus Group on Digital Financial Services, held on 6-7 December 2016** at the same venue as above. The workshop provided a platform to share the findings of the Focus Group on Digital Financial Services and to identify collective action and define the next steps.

Two new ITU Focus Groups have been created under the parentship of TSAG, namely:

* **The ITU-T Focus Group on “Digital Currency including Digital Fiat Currency (FG DFC)”**, which will carry out an investigation of the digital fiat currency platforms, focusing on the platform features and characteristics, security challenges to prevent counterfeiting of currencies in digital form and overcome challenges of interoperability with other payment systems.
* **The ITU-T Focus Group on “Application of Distributed Ledger Technology (FG DLT)”,** whichwill analyse applications and services based on DLT that can be standardized by ITU-T study groups, identify best practices and guidance which could support the implementation of such applications and services on a global scale and identify a way forward that ITU-T study groups need to study in order to meet the urgent market needs.
* **The Global Dialogue on Digital Financial Inclusion** **(GDDFI)** **was held in Sharm-el Sheikh, Egypt, on 11 May 2016 as a thematic pre-event of the Global Symposium for Regulators (GSR-16)** organized by BDT with the support of the Bill & Melinda Gates Foundation, attracting over 500 participants from the telecommunication and financial services sectors. GDDFI is part of ITU-D’s initiative to foster and strengthen collaborative regulation between ICT regulators and regulators from other sectors. GDDFI complements at high political level the technical work done by the Focus Group on Digital Financial Services. In 2016, GDDFI identified policy, regulatory, and business collaborative guiding measures to move forward the digital financial inclusion agenda by building synergies at the national, regional and global levels.
* **At ITU Telecom World 2016 which took place in Bangkok, Thailand, on 14-17 November,** BDT and TSB organized a number of side events, including the 7th **Private Sector Chief Regulatory Officers (CRO) meeting and the Chief Technology Officers (CTO) meeting, respectively.** CRO meetings bring together senior industry executives to share experiences and exchange ideas on how to strengthen the private sector's involvement and engagement in global, regional and national initiatives and to identify mechanisms to better foster an enabling environment for future development of the sector. The 7th CRO meeting focused on concrete case studies and project proposals for future elaboration.
* **An** **International Meeting of Users of the Spectrum Management System for Developing Countries (SMS4DC) took place on 8-9 December 2016** was organized by BDT and BR at the ITU headquarters in Geneva, the aim being to summarize why computerized spectrum management is required, analyse the main functions of SMS4DC, propose further developments, understand the needs and proposals as well as share the experiences of targeted users in order to meet their requirements.
* **In 2016, regional forums and training courses on conformance and interoperability (C&I)** were conducted in collaboration with TSB and BR, focusing on conformity assessment procedures, type approval testing for mobile terminals, and different C&I testing domains for Africa, Americas, Arab States, Asia-Pacific, and the Commonwealth of Independent States (CIS). These capacity building events were offered to 130 participants from 60 countries in real testing facilities through the collaboration of laboratory partners in the C&I Programme, namely China Academy of Telecommunication Research of MIIT (CAICT), *Centre d'Etudes et de Recherches des Télécommunications* (CERT), *Centro de Pesquisa e Desenvolvimento em Telecomunicações* (CPqD) and Telecom Italia Lab (TiLab).
* **A Joint ITU-ATU (African Telecommunications Union) Workshop on Cybersecurity Strategy in Africa** **organized in Khartoum, Sudan, from 24 to 28 July 2016** back-to-back with the first Arabic and African Regional Cybersecurity Symposium laid the foundation for the harmonization of cybersecurity legal frameworks in Africa.
* **A Central America Summit on Digital Terrestrial Television and Digital Dividend** **was held in San Salvador, El Salvador, on 25‐26 July 2016**, co-organized by BR with COMTELCA and hosted by SIGET El Salvador, in cooperation with CITEL and CTU. The outcome of the event was the adoption by COMTELCA members of a declaration on the need to consolidate road maps for the transition to digital terrestrial television and for the implementation of the digital dividend. As a follow-up, in collaboration with COMTELCA, CTU, and CITEL, BR is organizing a series of regional frequency coordination meetings on the use of the VHF band (174‐216 MHz) and the UHF band (470‑790 MHz). The first meeting was held in Managua, Nicaragua, on 8-10 March 2017.
* **An ITU International Satellite Symposium 2016: “Satellite Regulation, Market, Technology Trends and Industry Opportunities"** was preceded by a one day **ITU Workshop on the Efficient Use of the Spectrum/Orbit Resource**. Both events took place on 6 and on 7-8 September 2016 respectively, in Denpasar, Bali, Indonesia, hosted by the Ministry of Communication and Information Technology, with the support of *Asosiasi Satelit* *Indonesia* (ASSI).
* **A Commonwealth Telecommunications Organization Forum 2016**: **ICTs for Inclusive Growth** was held in Denarau, Fiji, from 12 to 14 September 2016, hosted by the Government of Fiji. The forum was attended by ministers, senior policy-makers, regulators and industry leaders from the Commonwealth.
* **The 44th Research Conference on Communications, Information and Internet Policy** was organized by George Mason University in Arlington, Virginia, United States, from 30 September to 1 October 2016. BR participated in a debate on the interaction of national policies with the international spectrum management regime.
* **An ITU Symposium and Workshop on small satellite regulation and communication systems 2016** was organized by BR, in cooperation with *Universidad* of Chile with the support of *Subsecretaria de Telecomunicaciones* of Chile (SUBTEL). The event was attended by 80 participants, representing 22 countries mostly from the Americas region.

**4. Meeting of the Inter-Sector Coordination Team on Issues of Mutual Interest**

On 10 May 2017, the Team met under its chairman Mr Fabio Bigi to review progress made since its March 2016 meeting.

The Team reviewed all documents on its agenda, approved the mappings in Attachments 1 and 2, and also updated the list of areas of mutual interest to include candidate topics on working methods for ITU inter-Sector coordination (see **Annex 1**).

Both Attachments 1 and 2, which refer to “Matching of ITU-D Study Group 1 and 2 Questions of interest to ITU-T study groups” and “Matching of ITU-R WPs of interest to ITU-T study groups”, respectively, are attached to this report.

The Team noted the liaison statement from RAG to TDAG on cooperation and coordination between ITU-R and ITU-D on WTDC Resolution 9 (Rev. Dubai, 2014) and the measures and course of action proposed.

**Annex 1**

**List of areas of mutual interest**

1. Participation

1.1 Remote participation.

1.2 E-meetings, e-correspondence groups.

1.3 Increasing involvement of developing countries.

1.4 Participation issues, including vice-chairmen tasks.

1.5 Non-member participation.

2. Document handling

 2.1 Electronic document handling.

 2.2 Deadline for submission of secretariat contributions for action.

 2.3 Electronic access to documents, including the application of the access policy of the documents decided by Council.

3. Registration

 3.1 Harmonization of registration.

 3.2 Registration for participation in meetings, including for remote participants.

4. Improvement of the ITU webpages in official ITU languages taking into account best practices.

 4.1 Language issues

5. Meeting planning.

5.1 Preparation to conferences and meetings.

5.2 Further enhancement and optimization of seminars/symposia/workshops/capacity building.

5.3 Collaboration and cooperation on events.

6. Streamlined establishment procedures of inter-Sector Rapporteur group (IRG).

6.1 Liaison statement handling of Inter-Sector Rapporteur Groups

7. Identification of technical issues with common interests.

8. Exchange of information on related study activities

8.1 Improvement of interaction between working parties and study groups of different Sectors.

9. Working methods (Resolution 1) of the three Sectors and application of best practices.

10. Sector membership.

**Attachment 1**

**Matching of ITU-D SG 1 and SG 2 Questions of interest to ITU-T study groups**

Amendments in Table 1 below reflect, inter alia, updated ITU-T Questions for the 2017-2020 study period.

**Table 1 – ITU-D Questions vis-à-vis ITU-T Questions**

| **ITU-D Question** | **ITU-D SG** | **ITU-T SG** | **ITU-T SG Questions** |
| --- | --- | --- | --- |
| [Question 1/1](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ01.1&stg=1): Policy, regulatory and technical aspects of the migration from existing networks to broadband networks in developing countries, including next-generation networks, m-services, OTT services and the implementation of IPv6 | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=1) | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q1/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx): Application of numbering, naming, addressing and identification plans for fixed and mobile telecommunications services |
| [SG3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/default.aspx) | [Q1/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q1.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services using the next-generation networks (NGNs), future networks, and any possible future development, including adaptation of existing D-series Recommendations to the evolving user needs[Q2/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services, other than those studied in Question 1/3, including adaptation of existing D-series Recommendations to the evolving user needs[Q3/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx): Study of economic and policy factors relevant to the efficient provision of international telecommunication services[Q4/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q4.aspx): Regional studies for the development of cost models together with related economic and policy issues[Q11/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q11.aspx): Economic and policy aspects of big data and digital identity in international telecommunications services and networks |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q5/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q5.aspx): Software components application programming interfaces (APIs), frameworks and overall software architecture for advanced content distribution services within the scope of Study Group 9[Q8/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx): The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms[Q9/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q9.aspx): Requirements, methods, and interfaces of the advanced service platforms to enhance the delivery of sound, television, and other multimedia interactive services over cable television network |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q1/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q1.aspx): Signalling and protocol architectures in emerging telecommunication environments and guidelines for implementations[Q2/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q2.aspx): Signalling requirements and protocols for services and applications in emerging telecommunication environments[Q4/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q4.aspx): Protocols for control, management and orchestration of network resources[Q5/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q5.aspx): Protocols and procedures supporting services provided by broadband network gateways[Q15/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx): Combating counterfeit and stolen ICT equipment |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx)[QSDG](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/QSDG.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q11/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q11.aspx): Performance considerations for interconnected networks[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspxhttp%3A/www.itu.int/en/ITU-T/studygroups/2013-2016/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies[Q18/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q18.aspx): Measurement and control of the end-to-end quality of service (QoS) for advanced television technologies, from image acquisition to rendering, in contribution, primary distribution and secondary distribution networks[Q19/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q19.aspx): Objective and subjective methods for evaluating perceptual audiovisual quality in multimedia services |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q1/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q1.aspx): Innovative services scenarios, deployment models and migration issues based on Future Networks[Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx): Next-generation network (NGN) evolution with innovative technologies including software-defined networking (SDN) and network function virtualization (NFV)[Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q22/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q22.aspx): Upcoming network technologies for IMT-2020 and Future Networks |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Coordination of optical transport network standards[Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures[Q19/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q19.aspx): Requirements for advanced service capabilities over broadband cable home networks |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx): Multimedia coordination[Q11/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q11.aspx): Multimedia systems, terminals, gateways and data conferencing[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV[Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q2/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q2.aspx): Security architecture and framework |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [Question 2/1](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ02.1&stg=1): Broadband access technologies, including IMT, for developing countries | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=1) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q4/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q4.aspx): Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks[Q7/9:](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx) Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q6/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q6.aspx): Protocols supporting control and management technologies for IMT-2020[Q10/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q10.aspx): Testing of emerging IMT-2020 technologies |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspxhttp%3A/www.itu.int/en/ITU-T/studygroups/2013-2016/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q2/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q2.aspx): Optical systems for fibre access networks[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx): Communications for smart grid[Q18/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx): Broadband in-premises networking[Q19/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q19.aspx): Requirements for advanced service capabilities over broadband cable home networks |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [Question 3/1](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ03.1&stg=1): Access to cloud computing: challenges and opportunities for developing countries | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=1) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and sustainable clean energy |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q14/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q14.aspx): Cloud interoperability testing |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q17/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q17.aspx): Requirements, ecosystem, and general capabilities for cloud computing and big data[Q18/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q18.aspx): Functional architecture for cloud computing and big data[Q19/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q19.aspx): End-to-end Cloud computing management, cloud security and big data governance |
| [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx)[SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | JRG-CCM – Joint Rapporteurs Group on Cloud Computing Management |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Coordination of optical transport network standards[Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q8/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q8.aspx): Cloud computing security |
| [Question 4/1](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ04.1&stg=1): Economic policies and methods of determining the costs of services related to national telecommunication/ICT networks, including next-generation networks | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=1) | [SG3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/default.aspx) | [Q1/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q1.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services using the next-generation networks (NGNs), future networks, and any possible future development, including adaptation of existing D-series Recommendations to the evolving user needs[Q2/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services, other than those studied in Question 1/3, including adaptation of existing D-series Recommendations to the evolving user needs[Q3/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx): Study of economic and policy factors relevant to the efficient provision of international telecommunication services[Q4/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q4.aspx): Regional studies for the development of cost models together with related economic and policy issues[Q11/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q11.aspx): Economic and policy aspects of big data and digital identity in international telecommunications services and networks |
| [Question 5/1](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ05.1&stg=1): Telecommunications/ICTs for rural and remote areas | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=1) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and sustainable clean energy[Q8/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q8.aspx): Adaptation to climate change and low cost and sustainable resilient information and communication technologies (ICTs) |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Coordination of optical transport network standards[Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV[Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services[Q26/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx): Accessibility to multimedia systems and services[Q28/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q28.aspx): Multimedia framework for e-health applications |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [Question 6/1](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ06.1&stg=1): Consumer information, protection and rights: Laws, regulation, economic bases, consumer networks | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=1) | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q1/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx): Application of numbering, naming, addressing and identification plans for fixed and mobile telecommunications services |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q15/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx): Combating counterfeit and stolen ICT equipment |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx): Human factors related issues for improvement of the quality of life through international telecommunications |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification |
| [Question 7/1](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ07.1&stg=1): Access to telecommunication/ICT services by persons with disabilities and with specific needs | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=1) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q6/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q6.aspx): Functional requirements for residential gateway and set-top box for the reception of advanced content distribution services |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx): Human factors related issues for improvement of the quality of life through international telecommunications[Q26/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx): Accessibility to multimedia systems and services |
| [JCA-AHF](http://www.itu.int/en/ITU-T/jca/ahf/Pages/default.aspx) | Joint Coordination Activity on Accessibility and Human Factors (JCA-AHF) |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms |
| [Question 8/1](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ08.1&stg=1): Examination of strategies and methods of migration from analogue to digital terrestrial broadcasting and implementation of new services | [SG1](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=1) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx): Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution ("redistribution control" for digital cable television distribution to the home)[Q4/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q4.aspx): Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks[Q6/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q6.aspx): Functional requirements for residential gateway and set-top box for the reception of advanced content distribution services[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q8/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx): The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q19/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q19.aspx): Requirements for advanced service capabilities over broadband cable home networks |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| [Question 1/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ01.2&stg=2): Creating the smart society: Social and economic development through ICT applications | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q9/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Assessment of sustainability impacts of information and communication technology (ICT) to promote the Sustainable Development Goals (SDGs) |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Coordination of optical transport network standards[Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV[Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services[Q26/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx): Accessibility to multimedia systems and services[Q27/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q27.aspx): Vehicle gateway platform for telecommunication/ITS services and applications[Q28/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q28.aspx): Multimedia framework for e-health applications |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q13/17](http://itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q13.aspx): Security aspects for Intelligent Transport System |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [JCA-IoT and SC&C](http://www.itu.int/en/ITU-T/jca/iot/Pages/default.aspx) | Joint Coordination Activity on Internet of Things and Smart Cities and Communities (JCA-IoT and SC&C) |
| [Question 2/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ02.2&stg=2): Information and telecommunications/ICTs for e-health | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q1/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q1.aspx): Signalling and protocol architectures in emerging telecommunication environments and guidelines for implementations |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx): Next-generation network (NGN) evolution with innovative technologies including software-defined networking (SDN) and network function virtualization (NFV) |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Coordination of optical transport network standards[Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q28/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q28.aspx): Multimedia framework for e-health applications |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q9/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q9.aspx): Telebiometrics |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [Question 3/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ03.2&stg=2): Securing information and communication networks: Best practices for developing a culture of cybersecurity | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx): Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution ("redistribution control" for digital cable television distribution to the home) |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Coordination of optical transport network standards[Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures[Q14/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q14.aspx): Management and control of transport systems and equipment |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q4/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q4.aspx): Cybersecurity |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification |
| [Question 4/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ04.2&stg=2): Assistance to developing countries for implementing conformance and interoperability programmes | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q9/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q9.aspx): Service and networks benchmark testing, remote testing including Internet related performance measurements[Q11/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q11.aspx): Protocols and networks test specifications; frameworks and methodologies[Q12/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q12.aspx): Testing of Internet of things, its applications and identification systems[Q13/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q13.aspx): Monitoring parameters for protocols used in emerging networks, including cloud computing and software-defined networking/network function virtualization (SDN/NFV)[Q14/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q14.aspx): Cloud interoperability testing[Q15/11:](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx) Combating counterfeit and stolen ICT equipment |
| [Question 5/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ05.2&stg=2): Utilization of telecommunications/ICTs for disaster preparedness, mitigation and response | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q3/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx): Service and operational aspects of telecommunications, including service definition |
| [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q8/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q8.aspx): Adaptation to climate change and low cost and sustainable resilient information and communication technologies (ICTs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q8/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx): The Internet protocol (IP) enabled multimedia applications and services for cable television networks enabled by converged platforms |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q3/11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q3.aspx): Signalling requirements and protocols for emergency telecommunications |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx): Next-generation network (NGN) evolution with innovative technologies including software-defined networking (SDN) and network function virtualization (NFV) |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Coordination of optical transport network standards[Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures[Q16/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q16.aspx): Optical physical infrastructures[Q17/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q17.aspx): Maintenance and operation of optical fibre cable networks |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q8/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx): Immersive live experience systems and services[Q11/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q11.aspx): Multimedia systems, terminals, gateways and data conferencing[Q14/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q14.aspx): Digital signage systems and services |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q4/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q4.aspx): Cybersecurity |
| [Question 6/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ06.2&stg=2): ICT and climate change | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q6/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx): Achieving energy efficiency and sustainable clean energy[Q7/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx): Environmentally sound management of e-waste and information and communication technology (ICT) eco-friendly design, including dealing with ICT counterfeit devices[Q8/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q8.aspx): Adaptation to climate change and low cost and sustainable resilient information and communication technologies (ICTs)[Q9/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx): Assessment of sustainability impacts of information and communication technology (ICT) to promote the Sustainable Development Goals (SDGs) |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions |
| [Question 7/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ07.2&stg=2): Strategies and policies concerning human exposure to electromagnetic fields | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals |
| [Question 8/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ08.2&stg=2): Strategies and policies for the proper disposal or reuse of telecommunication/ICT waste material | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q7/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx): Environmentally sound management of e-waste and information and communication technology (ICT) eco-friendly design, including dealing with ICT counterfeit devices |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals |
| [Question 9/2](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ09.2&stg=2): Identification of study topics in the ITU-T and ITU-R study groups which are of particular interest to developing countries | [SG2](https://www.itu.int/net4/ITU-D/CDS/sg/index.asp?lg=1&sp=2014&stg=2) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q4/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q4.aspx): Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks [Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q15/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx): Combating counterfeit and stolen ICT equipment |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | BSG/15 |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q1/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q1.aspx): Telecommunication/ICT security coordinationBSG/17 |
| [SG20](http://www.itu.int/en/ITU-T/studygroups/2013-2016/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [FG-DPM](https://www.itu.int/en/ITU-T/focusgroups/dpm/Pages/default.aspx) | ITU-T Focus Group on Data Processing and Management to support IoT and Smart Cities & Communities |

**Table 2 – Matrix of ITU-D Questions and ITU-T Questions**

|  | **ITU-D SG1** | **ITU-D SG2** |
| --- | --- | --- |
| [**Q1/1**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ01.1&stg=1) | [**Q2/1**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ02.1&stg=1) | [**Q3/1**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ03.1&stg=1) | [**Q4/1**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ04.1&stg=1) | [**Q5/1**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ05.1&stg=1) | [**Q6/1**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ06.1&stg=1) | [**Q7/1**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ07.1&stg=1) | [**Q8/1**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG01-RGQ08.1&stg=1) | [**Q1/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ01.2&stg=2) | [**Q2/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ02.2&stg=2) | [**Q3/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ03.2&stg=2) | [**Q4/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ04.2&stg=2) | [**Q5/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ05.2&stg=2) | [**Q6/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ06.2&stg=2) | [**Q7/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ07.2&stg=2) | [**Q8/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ08.2&stg=2) | [**Q9/2**](http://www.itu.int/net4/ITU-D/CDS/sg/rgqlist.asp?lg=1&sp=2014&rgq=D14-SG02-RGQ09.2&stg=2) |
| **ITU-T SG2** | [**Q1/2**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx) | X |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |
| [**Q3/2**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| **ITU-T SG3** | [**Q1/3**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q1.aspx) | X |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q2/3**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx) | X |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q3/3**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx) | X |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q4/3**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q4.aspx) | X |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q11/3**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q11.aspx) | X |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG5** | [**Q3/5**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| [**Q6/5**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q6.aspx) |  |  | X |  | X |  |  |  |  |  |  |  |  | X |  |  |  |
| [**Q7/5**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q7.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  | X |  |
| [**Q8/5**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q8.aspx) |  |  |  |  | X |  |  |  |  |  |  |  | X | X |  |  |  |
| [**Q9/5**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q9.aspx) |  |  |  |  |  |  |  |  | X |  |  |  |  | X |  |  |  |
| **ITU-T SG9** | [**Q1/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx) |  | X |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| [**Q2/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx) |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |  |  |
| [**Q3/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q4/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q4.aspx) |  | X |  |  |  |  |  | X |  |  |  |  |  |  |  |  | X |
| [**Q5/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q5.aspx) | X |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| [**Q6/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q6.aspx) |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| [**Q7/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx) |  | X |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| [**Q8/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q8.aspx) | X |  |  |  |  |  |  | X |  |  |  |  | X |  |  |  |  |
| [**Q9/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q9.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q10/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |
| **ITU-T SG11** | [**Q1/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q1.aspx) | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [**Q2/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q2.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q3/11**](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q4/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q4.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q5/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q5.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q6/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q6.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q9/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q9.aspx) |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [**Q10/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q10.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q11/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q11.aspx) |  | X |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [**Q12/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q12.aspx) |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [**Q13/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q13.aspx) |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [**Q14/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q14.aspx) |  |  | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [**Q15/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q15.aspx) | X |  |  |  |  | X |  |  |  |  |  | X |  |  |  |  | X |
| **ITU-T SG12** | [**Q1/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx) | X |  | X |  | X |  | X |  | X | X |  |  | X |  |  |  | X |
| [**Q11/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q11.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q12/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q17/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q18/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q18.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q19/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q19.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG13** | [**Q1/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q1.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q2/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx) | X |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |
| [**Q5/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx) | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |
| [**Q16/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx) |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |
| [**Q17/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q17.aspx) |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q18/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q18.aspx) |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q19/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q19.aspx) |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q22/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q22.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG15** | [**Q1/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx) | X | X | X |  | X |  |  |  | X | X | X |  | X |  |  |  |  |
| [**Q2/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q2.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q3/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx) | X |  | X |  | X |  |  |  | X | X | X |  | X |  |  |  |  |
| [**Q4/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q12/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx) | X |  | X |  | X |  |  |  | X | X | X |  | X |  |  |  |  |
| [**Q14/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q14.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |
| [**Q15/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q16/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q16.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q17/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q17.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q18/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q19/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q19.aspx) | X | X |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| **ITU-T SG16** | [**Q1/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q1.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q8/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q11/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q11.aspx) | X |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q13/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx) | X |  |  |  | X |  |  | X | X |  |  |  |  |  |  |  |  |
| [**Q14/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q14.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q21/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx) | X | X |  |  | X |  |  |  | X |  |  |  |  |  |  |  |  |
| [**Q24/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx) |  |  |  |  |  | X | X |  |  |  |  |  |  |  |  |  |  |
| [**Q26/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q26.aspx) |  |  |  |  | X |  | X |  | X |  |  |  |  |  |  |  |  |
| [**Q27/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q27.aspx) |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |
| [**Q28/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q28.aspx) |  |  |  |  | X |  |  |  | X | X |  |  |  |  |  |  |  |
| **ITU-T SG17** | [**Q1/17**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q1.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |
| [**Q2/17**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q2.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q4/17**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q4.aspx) |  |  |  |  |  |  |  |  |  |  | X |  | X |  |  |  |  |
| [**Q8/17**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q8.aspx) |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q9/17**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q9.aspx) |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [**Q13/17**](http://itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q13.aspx) |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |
| **ITU-T SG20** | [**Q1/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx) | X | X |  |  | X | X | X |  | X |  |  |  |  |  |  |  | X |
| [**Q2/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx) | X | X |  |  | X |  |  |  |  |  |  |  |  | X | X | X | X |
| [**Q3/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx) | X | X |  |  | X |  |  |  |  |  |  |  |  |  |  |  | X |
| [**Q4/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx) | X | X |  |  | X | X | X |  | X | X |  |  |  |  |  |  | X |
| [**Q5/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx) | X | X |  |  | X | X |  |  |  | X |  |  |  | X |  |  | X |
| [**Q6/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx) | X | X |  |  | X | X |  |  | X |  | X |  |  |  |  |  | X |
| [**Q7/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx) | X | X |  |  | X |  |  |  | X | X |  |  |  |  |  |  | X |

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**Attachment 2**

**Matching of ITU-R WPs of interest to ITU-T study groups**

Amendments in Table 1 below reflect, inter alia, updated ITU-T Questions for the 2017-2020 study period.

**Table 1 – ITU-R WPs vis-à-vis ITU-T Questions**

| ITU-R WP | ITU-R SG | ITU-T SG | ITU-T SG Questions |
| --- | --- | --- | --- |
| [WP 1A](https://www.itu.int/go/ITU-R/wp1a): Spectrum engineering techniques | [SG1](https://www.itu.int/en/ITU-R/study-groups/rsg1/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx): Communications for smart grid[Q18/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx): Broadband in-premises networking |
| [WP 1B](https://www.itu.int/go/ITU-R/wp1b): Spectrum management methodologies and economic strategies | [SG1](https://www.itu.int/en/ITU-R/study-groups/rsg1/Pages/default.aspx) | [SG3](https://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/default.aspx) | [Q2/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx): Development of charging and accounting/settlement mechanisms for international telecommunications services, other than those studied in Question 1/3, including adaptation of existing D-series Recommendations to the evolving user needs[Q3/3](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx): Study of economic and policy factors relevant to the efficient provision of international telecommunication services |
| [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [WP 1C](https://www.itu.int/go/ITU-R/wp1c): Spectrum monitoring | [SG1](https://www.itu.int/en/ITU-R/study-groups/rsg1/Pages/default.aspx) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q8/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q8.aspx): Adaptation to climate change and low cost and sustainable resilient information and communication technologies (ICTs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [WP 3J](https://www.itu.int/go/ITU-R/wp3j): Propagation fundamentals | [SG3](https://www.itu.int/en/ITU-R/study-groups/rsg3/Pages/default.aspx) |  |  |
| [WP 3K](https://www.itu.int/go/ITU-R/wp3k): Point-to-area propagation |  |  |
| [WP 3L](https://www.itu.int/go/ITU-R/wp3l): Ionospheric propagation and radio noise | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [WP 3M](https://www.itu.int/go/ITU-R/wp3m): Point-to-point and Earth-space propagation | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [WP 4A](https://www.itu.int/go/ITU-R/wp4a): Efficient orbit/spectrum utilization for FSS and BSS | [SG4](https://www.itu.int/en/ITU-R/study-groups/rsg4/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks |
| [WP 4B](https://www.itu.int/go/ITU-R/wp4b): Systems, air interfaces, performance and availability objectives for FSS, BSS and MSS, including IP-based applications and satellite news gathering | [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification |
| [WP 4C](https://www.itu.int/go/ITU-R/wp4c): Efficient orbit/spectrum utilization for MSS and RDSS \*\* WP 4C will also deal with the performance issues related to RDSS | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q3/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx): Service and operational aspects of telecommunications, including service definition |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx): Human factors related issues for improvement of the quality of life through international telecommunications |
| [WP 5A](https://www.itu.int/go/ITU-R/wp5a): Land mobile service above 30 MHz\* (excluding IMT); wireless access in the fixed service; amateur and amateur-satellite services | [SG5](https://www.itu.int/en/ITU-R/study-groups/rsg5/Pages/default.aspx) | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q1/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx): Application of numbering, naming, addressing and identification plans for fixed and mobile telecommunications services |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx): Communications for smart grid |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q24/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx): Human factors related issues for improvement of the quality of life through international telecommunications[Q27/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q27.aspx): Vehicle gateway platform for telecommunication/ITS services and applications |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q6/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q6.aspx): Security aspects of telecommunication services, networks, and Internet of Things[Q13/17](http://itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q13.aspx): Security aspects for Intelligent Transport System |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification |
| [CITS](http://www.itu.int/en/ITU-T/extcoop/cits) |  |
| [WP 5B](https://www.itu.int/go/ITU-R/wp5b): Maritime mobile service including Global Maritime Distress and Safety System (GMDSS); aeronautical mobile service and radiodetermination service | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q8/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q8.aspx): Adaptation to climate change and low cost and sustainable resilient information and communication technologies (ICTs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services[Q22/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q22.aspx): Upcoming network technologies for IMT-2020 and Future Networks[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [WP 5C](https://www.itu.int/go/ITU-R/wp5c): Fixed wireless systems; HF and other systems below 30 MHz in the fixed and land mobile services | [SG2](https://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/default.aspx) | [Q3/2](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx): Service and operational aspects of telecommunications, including service definition |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q1/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx): SG12 work programme and quality of service/quality of experience (QoS/QoE) coordination in ITU-T[Q12/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx): Operational aspects of telecommunication network service quality[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services[Q20/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q20.aspx): IMT-2020: Network requirements and functional architecture[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q2/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q2.aspx): Optical systems for fibre access networks[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Optical physical infrastructures[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q11/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q11.aspx): Signal structures, interfaces, equipment functions, and interworking for optical transport networks |
| [WP 5D](https://www.itu.int/go/ITU-R/wp5d): IMT Systems | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG11](https://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx) | [Q6/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q6.aspx): Protocols supporting control and management technologies for IMT-2020[Q10/11](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q10.aspx): Testing of emerging IMT-2020 technologies |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q7/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q7.aspx): Methods, tools and test plans for the subjective assessment of speech, audio and audiovisual quality interactions[Q9/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q9.aspx): Perceptual-based objective methods for voice, audio and visual quality measurements in telecommunication services[Q10/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q10.aspx): Conferencing and telemeeting assessment[Q13/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q13.aspx): Quality of experience (QoE), quality of service (QoS) and performance requirements and assessment methods for multimedia[Q14/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q14.aspx): Development of models and tools for multimedia quality assessment of packet-based video services[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q5/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx): Applying networks of future and innovation in developing countries[Q16/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx): Knowledge-centric trustworthy networking and services[Q20/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q20.aspx): IMT-2020: Network requirements and functional architecture[Q23/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx): Fixed-Mobile Convergence including IMT-2020 |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q2/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q2.aspx): Optical systems for fibre access networks[Q3/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx): Optical physical infrastructures[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q11/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q11.aspx): Signal structures, interfaces, equipment functions, and interworking for optical transport networks[Q12/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx): Transport network architectures |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| [Q21/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx): Multimedia framework, applications and services |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q6/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q6.aspx): Security aspects of telecommunication services, networks, and Internet of Things |
| [SG20](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) | [Q1/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx): End to end connectivity, networks, interoperability, infrastructures and Big Data aspects related to IoT and SC&C[Q2/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx): Requirements, capabilities, and use cases across verticals[Q3/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx): Architectures, management, protocols and Quality of Service[Q4/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx): e/Smart services, applications and supporting platforms[Q5/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx): Research and emerging technologies, terminology and definitions[Q6/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx): Security, privacy, trust and identification[Q7/20](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx): Evaluation and assessment of Smart Sustainable Cities and Communities |
| [WP 6A](https://www.itu.int/go/ITU-R/wp6a): Terrestrial broadcasting delivery | [SG6](https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx) | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q3/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx): Human exposure to electromagnetic fields (EMFs) from information and communication technologies (ICTs) |
| [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q7/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q7.aspx): Methods, tools and test plans for the subjective assessment of speech, audio and audiovisual quality interactions[Q9/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q9.aspx): Perceptual-based objective methods for voice, audio and visual quality measurements in telecommunication services[Q10/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q10.aspx): Conferencing and telemeeting assessment[Q13/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q13.aspx): Quality of experience (QoE), quality of service (QoS) and performance requirements and assessment methods for multimedia[Q14/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q14.aspx): Development of models and tools for multimedia quality assessment of packet-based video services[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q2/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q2.aspx): Optical systems for fibre access networks[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q18/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx): Broadband in-premises networking |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| [WP 6B](https://www.itu.int/go/ITU-R/wp6b): Broadcast service assembly and access | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q5/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q5.aspx): Software components application programming interfaces (APIs), frameworks and overall software architecture for advanced content distribution services within the scope of Study Group 9 |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q7/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q7.aspx): Methods, tools and test plans for the subjective assessment of speech, audio and audiovisual quality interactions[Q9/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q9.aspx): Perceptual-based objective methods for voice, audio and visual quality measurements in telecommunication services[Q10/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q10.aspx): Conferencing and telemeeting assessment[Q13/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q13.aspx): Quality of experience (QoE), quality of service (QoS) and performance requirements and assessment methods for multimedia[Q14/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q14.aspx): Development of models and tools for multimedia quality assessment of packet-based video services[Q17/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx): Performance of packet-based networks and other networking technologies |
| [SG13](https://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx) | [Q2/13](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx): Next-generation network (NGN) evolution with innovative technologies including software-defined networking (SDN) and network function virtualization (NFV) |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q13/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q13.aspx): Network synchronization and time distribution performance |
| [SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [Q8/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx): Immersive live experience systems and services[Q13/16](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx): Multimedia application platforms and end systems for IPTV |
| [WP 6C](https://www.itu.int/go/ITU-R/wp6c): Programme production and quality assessment | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q2/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx): Methods and practices for conditional access, protection against unauthorized copying and against unauthorized redistribution ("redistribution control" for digital cable television distribution to the home)[Q7/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx): Cable television delivery of digital services and applications that use Internet protocol (IP) and/or packet-based data over cable networks[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [Q7/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q7.aspx): Methods, tools and test plans for the subjective assessment of speech, audio and audiovisual quality interactions[Q9/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q9.aspx): Perceptual-based objective methods for voice, audio and visual quality measurements in telecommunication services[Q10/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q10.aspx): Conferencing and telemeeting assessment[Q14/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q14.aspx): Development of models and tools for multimedia quality assessment of packet-based video services[Q18/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q18.aspx): Measurement and control of the end-to-end quality of service (QoS) for advanced television technologies, from image acquisition to rendering, in contribution, primary distribution and secondary distribution networks[Q19/12](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q19.aspx): Objective and subjective methods for evaluating perceptual audiovisual quality in multimedia services |
| [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q1/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx): Coordination of access and home network transport standards[Q4/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx): Broadband access over metallic conductors[Q15/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx): Communications for smart grid[Q18/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx): Broadband in-premises networking |
| [SG17](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) | [Q9/17](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q9.aspx): Telebiometrics |
| [IRG-AVA](https://www.itu.int/en/irg/ava/Pages/default.aspx): Intersector Rapporteur Group Audiovisual Media Accessibility | [SG6](https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx)[SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [IRG-AVA](https://www.itu.int/en/irg/ava/Pages/default.aspx): Intersector Rapporteur Group Audiovisual Media Accessibility |
| [IRG-AVQA](http://www.itu.int/en/irg/avqa/Pages/default.aspx): Intersector Rapporteur Group Audiovisual Quality Assessment | [SG6](https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx)[SG12](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) | [IRG-AVQA](http://www.itu.int/en/irg/avqa/Pages/default.aspx): Intersector Rapporteur Group Audiovisual Quality Assessment |
| [IRG-IBB](https://www.itu.int/en/irg/ibb/Pages/default.aspx): Integrated Broadcast-Broadband (IBB) | [SG6](https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx) | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx)[SG16](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) | [IRG-IBB](https://www.itu.int/en/irg/ibb/Pages/default.aspx): Integrated Broadcast-Broadband (IBB) |
| [WP 7A](https://www.itu.int/go/ITU-R/wp7a): Time signals and frequency standard emissions: Systems and applications (terrestrial and satellite) for dissemination of standard time and frequency signals | [SG7](https://www.itu.int/en/ITU-R/study-groups/rsg7/Pages/default.aspx) | [SG15](https://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/default.aspx) | [Q13/15](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q13.aspx): Network synchronization and time distribution performance |
| [WP 7B](https://www.itu.int/go/ITU-R/wp7b): Space radiocommunication applications: Systems for transmission/reception of telecommand, tracking and telemetry data for space operation, space research, Earth exploration-satellite, and meteorological satellite services | [SG9](https://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx) | [Q1/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx): Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution[Q10/9](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx): Work programme, coordination and planning |
| [WP 7C](https://www.itu.int/go/ITU-R/wp7c): Remote sensing systems: active and passive remote sensing applications in the Earth exploration-satellite service and systems of the MetAids service, as well as space research sensors, including planetary sensors | [SG5](https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx) | [Q8/5](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q8.aspx): Adaptation to climate change and low cost and sustainable resilient information and communication technologies (ICTs) |
| [WP 7D](https://www.itu.int/go/ITU-R/wp7d): Radio astronomy: radio astronomy and radar astronomy sensors, both Earth-based and space-based, including space very long baseline interferometry (VLBI) |  |  |

**Table 2 – Matrix of ITU-R WPs and ITU-T Questions**

|  | **ITU-R SG1** | **ITU-R SG2** | **ITU-R SG4** | **ITU-R SG5** | **ITU-R SG6** | **ITU-R SG7** |
| --- | --- | --- | --- | --- | --- | --- |
| [**WP 1A**](https://www.itu.int/go/ITU-R/wp1a) | [**WP 1B**](https://www.itu.int/go/ITU-R/wp1b) | [**WP 1C**](https://www.itu.int/go/ITU-R/wp1c) | [**WP 3J**](https://www.itu.int/go/ITU-R/wp3j) | [**WP 3K**](https://www.itu.int/go/ITU-R/wp3k) | [**WP 3L**](https://www.itu.int/go/ITU-R/wp3l) | [**WP 3M**](https://www.itu.int/go/ITU-R/wp3m) | [**WP 4A**](https://www.itu.int/go/ITU-R/wp4a) | [**WP 4B**](https://www.itu.int/go/ITU-R/wp4b) | [**WP 4C**](https://www.itu.int/go/ITU-R/wp4c) | [**WP 5A**](https://www.itu.int/go/ITU-R/wp5a) | [**WP 5B**](https://www.itu.int/go/ITU-R/wp5b) | [**WP 5C**](https://www.itu.int/go/ITU-R/wp5c) | [**WP 5D**](https://www.itu.int/go/ITU-R/wp5d) | [**WP 6A**](https://www.itu.int/go/ITU-R/wp6a) | [**WP 6B**](https://www.itu.int/go/ITU-R/wp6b) | [**WP 6C**](https://www.itu.int/go/ITU-R/wp6c) | [**WP 7A**](https://www.itu.int/go/ITU-R/wp7a) | [**WP 7B**](https://www.itu.int/go/ITU-R/wp7b) | [**WP 7C**](https://www.itu.int/go/ITU-R/wp7c) | [**WP 7D**](https://www.itu.int/go/ITU-R/wp7d) |
| **ITU-T SG2** | [**Q1/2**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q1.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| [**Q3/2**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/02/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |  |  |  |  |
| **ITU-T SG3** | [**Q2/3**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q2.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q3/3**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/03/Pages/q3.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG5** | [**Q3/5**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q3.aspx) |  | X |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |
| [**Q8/5**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/q8.aspx) |  |  | X |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  | X |  |
| **ITU-T SG9** | [**Q1/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q1.aspx) | X |  | X |  |  | X |  | X |  |  | X | X | X | X | X |  | X |  | X |  |  |
| [**Q2/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q2.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q5/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q5.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [**Q7/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q7.aspx) | X |  | X |  |  | X |  | X |  |  | X | X | X | X | X |  | X |  |  |  |  |
| [**Q9/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q9.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [**Q10/9**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/q10.aspx) | X |  | X |  |  | X | X |  |  | X | X | X | X | X | X |  | X |  | X |  |  |
| **ITU-T SG11** | [**Q6/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q6.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [**Q10/11**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/q10.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| **ITU-T SG12** | [**Q1/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q1.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X |  |  |  |  |  |  |  |  |
| [**Q7/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q7.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X | X | X |  |  |  |  |
| [**Q9/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q9.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X | X | X |  |  |  |  |
| [**Q10/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q10.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X | X | X |  |  |  |  |
| [**Q12/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q12.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X |  |  |  |  |  |  |  |  |
| [**Q13/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q13.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X | X |  |  |  |  |  |
| [**Q14/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q14.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X | X | X |  |  |  |  |
| [**Q17/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q17.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X | X | X | X |  |  |  |  |  |
| [**Q18/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q18.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q19/12**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/q19.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| **ITU-T SG13** | [**Q5/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q5.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X | X |  |  |  |  |  |  |  |
| [**Q2/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q2.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [**Q16/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q16.aspx) |  |  |  |  |  |  |  |  |  |  | X | X | X | X |  |  |  |  |  |  |  |
| [**Q20/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q20.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |
| [**Q22/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q22.aspx) |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| [**Q23/13**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/q23.aspx) |  |  |  |  |  |  |  |  | X |  | X | X | X | X |  |  |  |  |  |  |  |
| **ITU-T SG15** | [**Q1/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q1.aspx) | X |  |  |  |  |  |  |  |  |  |  |  | X | X | X |  | X |  |  |  |  |
| [**Q2/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q2.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X | X | X |  |  |  |  |  |  |
| [**Q3/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q3.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |
| [**Q4/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q4.aspx) | X |  |  |  |  |  |  |  |  |  |  |  | X | X | X |  | X |  |  |  |  |
| [**Q11/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q11.aspx) |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |
| [**Q12/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q12.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [**Q13/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q13.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  | X |  |  |  |
| [**Q15/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q15.aspx) | X |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  | X |  |  |  |  |
| [**Q18/15**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/15/Pages/q18.aspx) | X |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  | X |  |  |  |  |
| **ITU-T SG16** | [**Q8/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q8.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |
| [**Q13/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q13.aspx) |  |  |  |  |  |  |  |  | X |  |  |  |  | X | X | X |  |  |  |  |  |
| [**Q21/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q21.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [**Q24/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q24.aspx) |  |  |  |  |  |  |  |  |  | X | X |  |  |  |  |  |  |  |  |  |  |
| [**Q27/16**](http://itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/q27.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG17** | [**Q6/17**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q6.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |  |  |  |
| [**Q9/17**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q9.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| [**Q13/17**](http://itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/q13.aspx) |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |
| **ITU-T SG20** | [**Q1/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [**Q2/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [**Q3/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [**Q4/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [**Q5/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q5.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |
| [**Q6/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q6.aspx) |  |  |  |  |  |  |  |  | X |  | X |  |  | X |  |  |  |  |  |  |  |
| [**Q7/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q7.aspx) |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |

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