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|  | **18 January 2022** |
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| Director of TSB |
| Report of the Telecommunication Standardization Advisory Group to the World Telecommunication Standardization Assembly (WTSA-20), Part I: General |
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| **Abstract:** | Pursuant to CV197H, CV197I, CV204, and Resolution 1 (Rev. Hammamet, 2016) clauses 1.11.1, 4.4, 4.9, the Director of TSB is submitting herewith the report of the Telecommunication Standardization Advisory Group (TSAG) of the Telecommunication Standardization Sector (ITU-T) to WTSA-20 for its consideration and appropriate action. Appendix I provides additional information on the draft action plan for the analysis of ITU-T Study group restructuring. The report of TSAG consists of four parts: Part I - General (WTSA-20 Doc.23); Part II - Draft revised Resolutions (WTSA-20 Doc.24); Part III - Draft revised Recommendations of the ITU-T A-series (WTSA-20 Doc.25); and Part IV - TSAG report in respect of WTSA Resolution 22 (WTSA-20 Doc.26). |

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# Introduction

Pursuant to CV197H, CV197I, CV204, and Resolution 1 (Rev. Hammamet, 2016) clauses 1.11.1, 4.4, 4.9, the Director of TSB is submitting herewith the report of the Telecommunication Standardization Advisory Group (TSAG) of the Telecommunication Standardization Sector (ITU- T) to WTSA-20 for its consideration and appropriate action.

**1.1 Responsibilities of TSAG**

The responsibilities of the Telecommunication Standardization Advisory Group (TSAG) are set forth in Article 14A of the ITU Convention, WTSA Resolutions 1, 22, 40, 45, and other relevant Resolutions.

**1.2 Management team and meetings held by TSAG**

TSAG met on nine[[1]](#footnote-2) occasions (47 meetings days in the course of the study period, see Table 1) under the chairmanship of Mr Bruce GRACIE (Ericsson Canada). In the previous study period, there were five meetings with a total of 22 meeting days.

WTSA-16 in Hammamet appointed as Chairman of TSAG Mr Bruce GRACIE (Ericsson Canada), and eight Vice-Chairmen: Mr Omar Tayseer AL-ODAT (Jordan), Ms Rim BELHASSINE-CHERIF (Tunisia), Mr Reiner LIEBLER (Germany), Mr Victor Manuel MARTINEZ VANEGAS (Mexico), Mr Vladimir MINKIN (Russian Federation), Ms Monique MORROW (United States), Mr Matano NDARO (Kenya), and Ms Weiling XU (China, P.R.).

TABLE 1

Meetings of TSAG

|  |  |  |  |
| --- | --- | --- | --- |
| Dates | Reports(available in the six UN languages) | Contributions | TDs |
| 1 – 4 May 2017 | [TSAG-R 1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0001) | 24 | 121 |
| 26 February – 2 March 2018 | [TSAG-R 2](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0002) | 22 | 150 |
| 10 – 14 December 2018 | [TSAG-R 3](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0003) to [TSAG-R 7](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0007) | 15 | 172 |
| 23 – 27 September 2019 | [TSAG-R 8](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0008) | 38 | 191 |
| 10 – 14 February 2020 | [TSAG-R 9](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0009) | 36 | 132 |
| 21 – 25 September 2020 (\*) | [TSAG-R 10](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0010) | 21 | 121 |
| 11 – 18 January 2021 (\*) | [TSAG-R 11-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0011) to [TSAG-R 22](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0022) | 7 | 93 |
| 25 – 29 October 2021 (\*) | [TSAG-R 23](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0023) | 17 | 143 |
| 10 – 17 January 2022 (\*) | [TSAG-R 24](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0024) | 5 | 152 |

(\*) – virtual meeting.

All TSAG meetings (including its Rapporteur Group meetings) offered remote participation services:

− webcasting (passive listening);

− a trial of remote participation (listening/watching and active interventions) in the six UN languages;

− captioning (a transcription of the audio as it occurred).

Prior to each meeting of TSAG, management meetings were held with the Chairman, Vice-Chairmen and Counsellor and other staff members of TSB. Newbie sessions and guided tours to newcomers were offered by TSB.

During the study period 2017-2020, TSAG considered 183 Contributions (122 Contrtibutions in the study period 2013-2016, 123 Contributions in the study period 2009-2012; 146 Contributions in the study period 2005-2008) and 1275 TDs (622 TDs in 2013-2016, 463 TDs in 2009-2012; 685 TDs in 2005-2008).

Several TSAG Rapporteur Groups organized e-meetings during the interim period between TSAG meetings; see Table 1-bis.

TABLE 1-bis
Rapporteur group meetings organized under TSAG during the study period

| Dates | Place/Host | Rapporteur Group(s) | Event name |
| --- | --- | --- | --- |
| 1 – 4 May 2017 | Geneva, Switzerland/ITU-T | RG-SC,RG-SOP,RG-StdsStrat,RG-WP,RG-WM | First TSAG meeting |
| 7 July 2017 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 12 October 2017 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 27 October 2017 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 14 November 2017 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 26 February – 2 March 2018 | Geneva, Switzerland/ITU-T | RG-ResReview,RG-SC,RG-SOP,RG-StdsStrat,RG-WP,RG-WM | Second TSAG meeting |
| 31 May 2018 | virtual | RG-SC,RG-WM | TSAG joint RG-SC and RG-WM e-meeting |
| 29 June 2018 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 31 August 2018 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 18 September 2018 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 24 September 2018 | virtual | RG-SC | TSAG RG-SC e-meeting |
| 28 September 2018 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 30 November 2018 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 10 – 14 December 2018 | Geneva, Switzerland/ITU-T | RG-CPTRG,RG-ResReview,RG-SC,RG-StdsStrat,RG-WP,RG-WM | Third TSAG meeting |
| 28 February 2019 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 20 June 2019 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 27 June 2019 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 5 July 2019 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 29 August 2019 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 23 – 27 September 2019 | Geneva, Switzerland/ITU-T | RG-CPTRG,RG-ResReview,RG-SC,RG-StdsStrat,RG-WM,RG-WP | Fourth TSAG meeting |
| 1 November 2019 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 6 December 2019 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 18 – 19 December 2019 | virtual | RG-WM | TSAG RG-WM e-meetings |
| 20 January 2020 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 10 – 14 February 2020 | Geneva, Switzerland/ITU-T | RG-CPTRG,RG-ResReview,RG-SC,RG-StdsStrat,RG-WM,RG-WP | Fifth TSAG meeting |
| 30 April 2020 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 2 July 2020 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 28 – 29 July 2020 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 5 – 7 August 2020 | virtual | RG-WP | TSAG RG-WP e-meeting |
| 31 August 2020 | virtual | RG-ResReview | TSAG RG-ResReview e-meeting |
| 4 September 2020 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 18 September 2020 | virtual | --- | Interregional e-meeting for preparation of WTSA-20 |
| 21 – 25 September 2020 | virtual | RG-SC,RG-StdsStrat,RG-WM,RG-WP | Sixth TSAG e-meeting |
| 20 – 21 October 2020 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 26 October 2020 | virtual | RG-SC | TSAG RG-SC e-meeting |
| 26 October 2020 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 3 November 2020 | virtual | RG-WP | TSAG RG-WP e-meeting |
| 9 November 2020 | virtual | RG-SOP | TSAG RG-SOP e-meeting |
| 23 November 2020 | virtual | RG-SC | TSAG RG-SC e-meeting |
| 2 December 2020  | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 3 December 2020 | virtual | RG-ResReview | TSAG RG-ResReview e-meeting |
| 8 December 2020 | virtual | RG-WP | TSAG RG-WP e-meeting |
| 8 – 9 December 2020 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 8 January 2021 | virtual | --- | Interregional e-meeting for preparation of WTSA-20 |
| 11 – 18 January 2021 | virtual | RG-ResReview,RG-SC,RG-StdsStrat,RG-WM,RG-WP | Seventh TSAG e-meeting |
| 23 – 24 March 2021 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 8 April 2021 | virtual | RG-SC | TSAG RG-SC e-meeting |
| 22 June 2021 | virtual | RG-WP | TSAG RG-WP e-meeting |
| 24 June 2021 | virtual | RG-StdsStrat | TSAG RG-StdsStrat e-meeting |
| 29 June 2021 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 22 July 2021 | virtual | RG-SC | TSAG RG-SC e-meeting |
| 27 July 2021 | virtual | RG-WM | TSAG RG-WM-meeting |
| 9 September 2021 | virtual | RG-SC | TSAG RG-SC e-meeting |
| 15 September 2021 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 21 October 2021 | virtual | --- | Interregional e-meeting for preparation of WTSA-20 |
| 25 – 29 October 2021 | virtual | RG-ResReview,RG-SC,RG-WM,RG-WP | Eighth TSAG e-meeting |
| 22 – 23 November 2021 | virtual | RG-WP | TSAG RG-WP e-meeting |
| 24 November 2021 | virtual | RG-SC | TSAG RG-SC e-meeting |
| 26 November 2021 | virtual | RG-ResReview | TSAG RG-ResReview e-meeting on WTSA Resolution 67 |
| 30 November – 1 December 2021 | virtual | RG-WM | TSAG RG-WM e-meeting |
| 6 January 2022 | virtual | --- | Interregional e-meeting for preparation of WTSA-20 |
| 10 – 17 January 2022 | virtual | RG-ResReview,RG-SC,RG-WM,RG-WP | Ninth TSAG e-meeting |

# Organization of work

## 2.1 Organization of studies and allocation of work

**2.1.1** At its first meeting of the study period, TSAG decided to establish five Rapporteur Groups (RG-SC, RG-SOP, RG-StdsStrat, RG-WM, and RG-WP), two additional Rapporteur Groups (RG-ResReview, and RG-CPTRG) were established later during the course of the study period; and RG-CPTRG was terminated on 14 February 2020. The seven Rapporteur Group Groups allowed off-loading the TSAG plenary meetings, and enabled conducting interim e-meetings to progress the work.

During the study period, three ITU-T Focus Groups (FG-DFC, FG-DLT, and FG-QIT4N) were created under the parent-ship of TSAG for examining respective new work of the Sector, and one new ITU-T Joint Coordination Activity was started to widely coordinate on digital COVID-19 certificate standardization.

**2.1.2** Table 2 shows the number and title of each Rapporteur Group, and the name of its Rapporteur/co-Rapporteurs.

**2.1.3** Table 3 lists ITU-T FocusGroups created by TSAG during the study period.

TABLE 2
Organization of TSAG

| Rapporteur Group | Title of the Rapporteur Group | Rapporteur/Rotating co-Rapporteurs |
| --- | --- | --- |
| RG-CPTRG | Regional Groups | Mr Kwame BAAH-ACHEAMFUOR (Ghana). |
| RG-ResReview | Review of Resolutions | Mr Vladimir MINKIN, Russian Federation. |
| RG-SC | Strengthening collaboration | Mr Glenn PARSONS, Ericsson Canada. |
| RG-SOP | Strategic and operational plan | Mr Victor MARTINEZ VANEGAS, Mexico. |
| RG-StdsStrat | Standardization Strategy | Mr Yoichi MAEDA(\*), Japan;Mr Stephen HAYES(\*\*), Ericsson, USA;Mr Didier BERTHOUMIEUX(\*\*\*), Nokia Bell Labs, France;Ms Rim BELHASSINE-CHERIF(#), Tunisie Telecom, Tunisia;Mr Vasily DOLMATOV, Russian Federation(%);Mr David WARD(%), Cisco;Mr Arnaud TADDEI(#), Broadcom (former Symantec), United States;Ms Judy ZHU, Alibaba Group, China (P.R). |
| RG-WM | Working methods | Mr Steve TROWBRIDGE, Nokia (USA), United States. |
| RG-WP | Work programme and study group structure | Mr Reiner LIEBLER(@), Germany.Ms Miho NAGANUMA($), NEC Corporation. |

(\*): Rotating Rapporteur from 1 May 2017 – 2 March 2018.

(\*\*): Rotating Rapporteur from 3 March 2018 – 14 December 2018, and since 18 January 2021

(\*\*\*): Rotating Rapporteur from 15 December 2018 – 27 September 2019.

(#): co-Rapporteur since 14 December 2018; rotating Rapporteur from 28 September 2019 – 18 January 2021.

(%): co-Rapporteur until December 2018.

(@): Rapporteur until 18 January 2021.

($): Rapporteur since 18 January 2021.

TABLE 3
ITU-T Focus Groups (under the parent-ship of TSAG)

| Title of the Focus Group | Chairman,co-Chairmen | Vice-Chairmen |
| --- | --- | --- |
| Digital Currency including Digital Fiat Currency (FG-DFC) | Mr David WEN (eCurrency). | Mr Yao QIAN, Institute of Digital Money, People's Bank of China;Mr Jacques FRANCOEUR, San Jose State University, USA;Mr Ahmed SAID, NTRA, Egypt;Mr Mandar DESHPANDE, Ministry of Communications, India;Mr Njunga N'DUNGU, Former Governor, Central Bank Kenya;Mr Sami TRIMECH, Arab ICT Organization. |
| Application of Distributed Ledger Technology (FG-DLT) | Mr David WATRIN (Swisscom). | Ms Suzana MARANHÃO, Brazilian Development Bank (BNDES), Brazil. |
| Quantum Information Technology for Networks (FG-QIT4N) | Mr QIANG ZHANG, University of Science and Technology of China (USTC), China (P.R.);Mr Alexey BORODIN, (Rostelecom, Russian Federation);Mr James NAGEL, (L3Harris Technologies, United States of America). | Mr Dong-Hi SIM, SK Telecom, Korea (Rep. of);Mr Fahad ALDURAIBI, Communications and Information Technology Commission (CITC), Saudi Arabia;Mr Helmut GRIESSER, Adva Optical Networking, Germany;Mr Hyungsoo (Hans) KIM, KT Corporation, Korea (Rep. of);Mr Jiajun MA, QuantumCTek Co. Ltd., China (P.R.);Mr Junsen LAI, China Academy of Information and Communications Technology (CAICT), China (P.R.);Mr Kaoru KENYOSHI, National Institue of Information and Communications Technology (NICT), Japan;Mr Momtchil PEEV, Huawei Technologies Duesseldorf GmbH (HWDU), Germany. |

TABLE 3
Other Groups (if any)

| Title of the Group | Chairman | Co-Chairmen/Vice Chairmen |
| --- | --- | --- |
| ITU-T Ad-hoc group on governance and management of e-meetings (AHG-GME) | Mr Philip RUSHTON (United Kingdom) |  |
| ITU-T Correspondence Group on ITU-T study group restructuring | Mr Philip RUSHTON (United Kingdom) |  |
| ITU-T Joint Coordination Activity on Accessibility and Human Factors (JCA-AHF) | Ms Andrea SAKS (United States) | Mr Floris L. VAN NES(\*);Mr Christopher JONES(\*);Mr Gerry ELLIS(\*). |
| ITU-T Joint Coordination Activity on digital COVID-19 certificate (JCA-DCC) | Mr Heung-Youl YOUM (Korea, Rep. of) |  |
| ITU-T Standardization Committee for Vocabulary (SCV) | Ms Rim BELHAJ (Tunisia) | Mr Tong WU (China)(\*\*);Mr Konstantin TROFIMOV (Russian Federation)(\*\*);Mr Paul NAJARIAN (United States)(\*\*). |
| IEC SMB/ISO TMB/ITU-T TSAG Standardization Programme Coordination Group (SPCG) | Ms Amanda RICHARDSON (ISO, BSI) | - |

(\*): Co-Chairman

(\*\*): Vice Chairman

**2.1.4** TSAG continued to operate the ITU-T Joint Coordination Activity on Accessibility and Human Factors (JCA-AHF) (see Table 3) with revised terms of references (see [TSAG R1 Annex E](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0001)), and considered at each TSAG meeting the progress report of the JCA-AHF. TSAG created a new ITU-T Joint Coordination Activity on digital COVID-19 certificate (ITU-T JCA- DCC) on 29 October 2021 with provisionally agreed terms of reference in [TSAG R12 Annex D](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0012).

**2.1.5** The ITU-T Standardization Committee for Vocabulary (SCV) continued its works and reported its progress to TSAG; see clause 3.4.1.

**2.1.7** TSAG approved the new IEC SMB/ISO TMB/ITU-T TSAG Standardization Programme Coordination Group (SPCG), for which TSAG appointed a delegation of TSAG representatives to SPCG; and is receiving the SPCG progress reports; see clause 3.2.3.4.

**2.1.8** From 18 January until 25 October 2021, TSAG (RG-WP) operated a correspondence group on ITU-T study group restructuring; see clause 3.2.7.4.

**2.1.9** From 25 October 2021 until 17 January 2022, TSAG operated an ad-hoc group on governance and management of e-meeting (AHG-GME); terms of reference are contained in [TSAG R12 Annex C](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0012), the report of AHG-GME is contained in [TSAG-TD1204](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1204). TSAG authorized AHG-GME to continue its activities until November 2022.

# 3 Results of the work accomplished during the 2017-2021 study period

## 3.1 General

During the study period, TSAG examined 183 contributions and generated a large number of TDs and 50 outgoing liaison statements.

Under its responsibilities to review the work programme of ITU-T and authority granted under Resolutions 22 (Rev. Hammamet, 2016) and 45 (Rev. Hammamet, 2016), TSAG during this period:

– revised four existing Recommendations in the ITU-T A-series (i.e. ITU-T A.1, A.5, A.13, and A.25), see Annex 1;

− revised the *the Rapporteur and Editor Manual;*

− created three ITU-T Focus Groups (FG-DFC, FG-DLT, and FG-QIT4N);

 TSAG inherited the outcome of the ITU-T Focus Group on Digital Financial Services (FG-DFS), which concluded its work in December 2016, and transferred at its first TSAG meeting the 28 technical reports and 85 recommendations of FG-DFS to ITU-T SG2, SG3, SG12, SG16 and SG17.

 TSAG, at its first meeting, established new ITU-T Focus Groups on Digital Currency including Digital Fiat Currency (FG-DFC) and on Application of Distributed Ledger Technology (FG-DLT) under the parent-ship of TSAG. TSAG extended the lifetime of FG-DLT and of FG-DFC from April 2019 to the September 2019.
TSAG received from FG-DLT eight final deliverables, received from FG-DFC seven final deliverables, and transferred them respectively to the relevant study groups. FG- DLT and FG-DFC concluded their work in 2019 and TSAG endorsed their termination.
TSAG, at its 4th meeting, established new ITU-T Focus Group FG-QIT4N under the parent-ship of TSAG. TSAG extended the lifetime of FG-QIT4N from September 2020 to December 2021. TSAG received from FG- QIT4N nine final deliverables and transferred them respectively to the relevant study groups.

− created one new ITU-T Joint Coordination Activity on digital COVID-19 certificates (JCA-DCC);

TSAG has sent numerous liaisons to the ITU-T study groups with advice and guidelines on working methods, external coordination and inter-study group matters. TSAG has also communicated with ITU-R, ITU-D and ISO/IEC JTC1. TSAG liaised with the six regional organizations on their prepartions for WTSA-20.

TSAG has been called upon by Resolutions of the Plenipotentiary Conference and decisions of Council to provide advice on a wide range of subjects. Such advice was prepared and transmitted in the appropriate manner on subjects such as the strategic and operational plans, linkage of strategic, financial and operational planning, electronic working methods, issues regarding bridging the standardization gap, and ITU-T Sector priorities.

## 3.2 Highlights of achievements

The main results achieved by TSAG and its Rapporteur Groups are briefly summarized.

### 3.2.1 TSAG Rapporteur Group on Regional Groups (RG-CPTRG)

TSAG, following up on Recommendation 8[[2]](#footnote-3) of the Plenipotentiary Conference 2018, created new RG-CPTRG ([terms of reference](https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/tsag/cptrg/SitePages/ToR.aspx)) during this study period, to clarify the criteria for creation, participation and termination of regional groups of Study Groups, and the role of TSAG in this regard. RG-CPTRG collected information from the study groups on the modalities of regional groups in ITU-T study groups, and obtained from ITU Legal Affairs Unit a legal opinion on regional groups. The reports of RG-CPTRG during TSAG meetings are contained in TSAG-TDs [284](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-181210-TD-GEN-0284), [453](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-190923-TD-GEN-0453), [645](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0645), and [766](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0766).

Regional Groups are proven effective mechanisms to assist in bridging the standardization gap by stimulating effective participation in ITU-T study groups and increasing the number and quality of contributions from various regions. ITU-T now has 24 regional groups:

* Eight for Africa (Study Groups 2, 3, 5, 11, 12, 13, 17, and 20).
* Four for the Americas (Study Groups 2, 3, 5, and 20).
* Five for the Arab States (Study Groups 2, 3, 5, 17, and 20).
* Two for Asia and the Pacific (Study Groups 3 and 5).
* Four for Eastern Europe, Central Asia and Transcaucasia (Study Groups 3, 11, 13, and 20).
* One for Europe and the Mediterranean Basin (Study Group 3).

TSAG RG-CPTRG collected information from the ITU-T study groups on their regional groups, which resulted in obtaining clarification on the current criteria for the creation of, participation in, and termination of regional groups of ITU-T study groups to address part of the first objective of the RG-CPTRG terms of reference. TSAG RG-CPTRG considered an opinion of the ITU Legal Affairs Unit (LAU) to address clarifications concerning the role of TSAG in the creation of regional groups of ITU-T study groups, and the rights of participation of sector members, associates and academia (ref. [TSAG-TD577](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0577)). TSAG agreed that the objectives under the terms of reference of RG-CPTRG have been satisfied and that there are no additional meetings required, and henceforth, TSAG closed RG-CPTRG. The results of RG-CPTRG are summarized in Annex 2 (ref. [TSAG- TD766](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0766)).

### 3.2.2 TSAG Rapporteur Group on Review of Resolutions (RG-ResReview)

In anticipation of WTSA-20, TSAG created a new Rapporteur Group ([terms of reference](https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/tsag/resolutions/SitePages/ToR.aspx)) during this study period on the review of WTSA Resolutions, with a view to streamlining them, taking into account the Resolutions in Plenipotentiary Conference and other Sectors as appropriate. The progress reports of RG-ResReview from its interim meetings are contained in TSAG TDs [813](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200921-TD-GEN-0813), [955](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-0955), and [1230](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1230); and the reports RG-ResReview during TSAG meetings are contained in TSAG-TDs [245](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-180226-TD-GEN-0245), [280](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-181210-TD-GEN-0280), [455-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-190923-TD-GEN-0455), [647](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0647), [920](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-0920), [1023](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-211025-TD-GEN-1023), and [1178](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1178)-R1.

The group elaborated the concept and notions of what streamlining means for WTSA and PP Resolutions (see [TSAG-LS30-R1](https://www.itu.int/net/ITU-T/ls/ls.aspx?isn=22627)), studied the potential of streamlined Resolutions, and considered a huge number of draft proposals for modified WTSA Resolutions. The group considered side-by side proposals from regional telecommunication organizations for WTSA Resolutions 22, 35, 43, 44, 59, 67,70, 72, 73, 75, 83 and 84. There was common agreement on suppression of Resolution 35 (Rev. Hammamet, 2016). Detailed considerations and consultations took place on the proposals to modify Resolution 67 (Rev. Hammamet, 2016), and the result is releflected in [TSAG-TD1230](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1230). Comments and proposals expressed during considerations facilitated preparation of regional telecommunication organizations for WTSA and will help during discussions at WTSA.

The group assisted TSAG with the identification of [focal points and coordinators](https://extranet.itu.int/sites/itu-t/wtsa-20/prepmeet/Lists/ContactSheet/DefViewContacts.aspx) of the regional organizations in their preparations of WTSA-20, as well as with the compilation of a mapping table (see [TSAG-TD1224](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1224)) of contributions from the regional organizations onto the WTSA Resolutions and ITU-T A-Series Recommendations to TSAG Rapporteur groups.

### 3.2.3 TSAG Rapporteur Group on Strengthening collaboration (RG-SC)

TSAG RG-SC ([terms of reference](https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/tsag/sc/SitePages/ToR.aspx)) examined existing methods and approaches to collaboration and/or cooperation with other standards organizations, as well as with other ITU Sectors with the view to encouraging ITU-T and other SDOs to work more collaboratively and/or cooperatively in a reciprocal manner based on mutual respect. Liaison activities with ISO/IEC JTC 1, and IAB took place IEC on external relations. The progress reports of RG-SC from its interim meetings are contained in TSAG-TDs [318](https://www.itu.int/md/T17-TSAG-181210-TD-GEN-0318), [953](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-0953), [1054](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-211025-TD-GEN-1054), and [1202](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1202); and the reports of RG-SC during TSAG meetings are contained in TSAG-TDs [86](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-170501-TD-GEN-0086), [129](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-180226-TD-GEN-0129), [282](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-181210-TD-GEN-0282), [457](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-190923-TD-GEN-0457), [649](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0649), [779-R3](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200921-TD-GEN-0779), [922](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-0922), [1025-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-211025-TD-GEN-1025), and [1180](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1180).

This Rapporteur Group, in collaboration with TSAG RG-WM, assisted TSAG

* in the revision of Recommendations ITU-T A.5 "*Generic procedures for including references to documents of other organizations in ITU-T Recommendations*"

Notable amendments, principally from the Russian Federation, include but are not limited to:

* + Add a deadline for proposals asking for the inclusion of normative reference (clause 6.3),
	+ Add a reference to ITU-T A.5 justification for the qualification of the other organization into TAP Circular or AAP Last Call (clause 7.3),
	+ Add a requirement in the criteria for qualifying organizations, to notify ITU if the right of any party with material interest to be a member of the other organization is restricted (Annex B, 3); and
* and Recommendation ITU-T A.25 "*Generic procedures for incorporating text between ITU-T and other organizations*"

Notable amendments, principally from the Russian Federation, include but are not limited to:

* + Add requirements to clarify which organization is in charge of the maintenance of incorporated text (clause 6.1.2.10, Appendix II, 10),
	+ Add a deadline for Circular notification if the other organization is responsible of producing new versions of the text when the draft resulting ITU-T Recommendation is planned for determination for TAP consultation or consent for AAP last call (clause 6.1.3),
	+ Remove text related to transferring of any IPR issues from the other organization incorporated text to ITU-T Recommendation (clause 6.1.6),
	+ Add a requirement to change cover sheet of the resulting ITU-T Recommendation which contains some incorporated text (clause 6.1.7).

In October 2021, TSAG started a new revision of Recommendation ITU-T A.5 to address new requirements from ITU-T SG15 and material in a contribution, and the results was submitted as a proposal to WTSA-20.

Also, TSAG developed and agreed a new Appendix on best practices to Recommendation ITU-T A.23.

TSAG shared an updated list of collaboration mechanisms in ITU-T with all ITU-T study groups.

**3.2.3.1 ITU inter-Sector coordination**

Pursuant to Plenipotentiary Conference Resolution 191, TSAG, RAG, and TDAG continued to consider current and new activities and their distribution among ITU-R, ITU-T, and ITU-D. The group, through TSAG, is maintaining a close relationship with the RAG and TDAG in order to develop synergies with the objective of strengthening coordination and cooperation among the three ITU Sectors on matters of mutual interest. At each TSAG meeting, the inter-Sectoral Coordination Task Force from the General Secretariat, and the Inter-Sector Coordination Group (ISCG) provided their reports to TSAG.

The appointed TSAG representatives to ISCG are: Mr Vladimir Minkin and Mr Matano Ndaro (Vice-Chairmen of TSAG). Consultations are underway to confirm the TSAG nominations and appointments for the ITU-wide coordination of the high priority topics of climate change and accessibility.TSAG RG-SC considered the current situation with coordination activities between three ITU Sectors, or, bilaterally, on subjects common to ITU-T and either ITU-R or ITU-D, and TSAG continued updating and providing mappings of common interest areas of work between the ITU-D and ITU-T SGs and between the ITU-R and ITU-T SGs and shared them with RAG, TDAG, ISCG, and the ITU-T study groups. The coordination activities helped to identify areas of common interest and helped to reduce or avoid overlap and duplication of work among the Sectors.

**3.2.3.2 World Standards Cooperation (WSC)**

TSAG RG-SC received the reports of the 16th, 17th, 18th, 19th, and 20th annual WSC meetings between ISO and IEC to ITU-T. Those WSC meetings proved to be useful for coordination among ITU, ISO, and IEC at a higher level.

TSAG approved the revised WSC terms of reference.

**3.2.3.3 ISO/IEC JTC 1**

Mr Shigeru Miyake (Hitachi, Japan) is the appointed liaison officer to ISO/IEC JTC 1 since 2018, as Mr Olivier Dubuisson could not continue in this capacity; Mr Heng Qian is the appointed ISO/IEC JTC 1 Liaison Officer to ITU-T.

TSAG RG-SC, through Mr Miyake, is receiving the reports from the ISO/IEC JTC 1 plenary meetings, and considered any impacts for ITU-T, and gave advice to TSAG, to ITU-T study groups, and to other ITU-T groups. Liaison activities took place between TSAG and ISO/IEC JTC 1.

Consultations and information exchange took place with SPCG members and with the ISO/IEC JTC1 secretariat on the planned new work item of an new appendix on best practices to Recommendation ITU-T A.23; TSAG informed in [TSAG-LS48](https://www.itu.int/ifa/t/2017/ls/tsag/sp16-tsag-oLS-00048.docx) ISO/IEC JTC1 about the approval of Appendix II in ITU-T A.23 Amd.1.

**3.2.3.4 ISO/IEC/ITU-T Joint Task Force on effective collaboration (JTFEC), and IEC SMB/ISO TMB/ITU-T TSAG Standardization Programme Coordination Group (SPCG)**

Mr Ajit Jillavenkatesa (United States), Mr Yoichi Maeda (Japan), and Ms Gaelle Martin-Cocher (Blackberry, Canada) were the appointed TSAG representatives to participate in the ISO/IEC/ITU-T Joint Task Force on effective collaboration (JTFEC), which operated from May 2017 until September 2018. The Task Force prepared a proposal with terms of reference for a new IEC SMB/ISO TMB/ITU-T TSAG Standardization Programme Coordination Group (SPCG), and a communication statement, which were approved by TSAG, IEC SMB, and ISO TMB.

The IEC SMB/ISO TMB/ITU-T TSAG Standardization Programme Coordination Group (SPCG) is operational since Summer 2019. Mr Ajit Jillavenkatesa, Mr Yoichi Maeda (Japan), and Ms Gaelle Martin-Cocher were the appointed TSAG representatives to participate in the SPCG, which reported its activities and recommendations to TSAG, IEC SMB and to ISO TMB. SPCG has been receiving and reviewing proposals for proposed new fields of work and provided feedback to TSAG. The SPCG is providing a progress report of its activities to each TSAG meeting.

The sixth TSAG meeting appointed a new TSAG delegatation to the SPCG comprising Mr Ajit Jillavenkatesa (United States), Ms Gaelle Martin-Cocher (InterDigital Canada Ltee), Ms Miho Naganuma (NEC Corporation), and Mr Per Fröjdh (Telefon AB - LM Ericsson).

TSAG disseminated an IEC/ISO/ITU-T SPCG approved paper on *An imperative from the ISO/TMB, IEC/SMB and ITU-T TSAG effective coordination among ISO, IEC and ITU-T technical activities.*

**3.2.3.5 Joint IEC-ISO-ITU Smart Cities Task Force**

TSAG took note of the new joint IEC-ISO-ITU Smart Cities Task Force.

**3.2.3.6 Global Standards Collaboration (GSC)**

TSAG RG-SC considered the outcomes on the outcome of the Global Standards Collaboration (GSC-22) meeting, 26-27 March 2019.

**3.2.3.7 Collaboration with IEC/SEG 8**

TSAG collaborates with IEC/SEG 8 on hot topic radar, where Mr Yoichi Maeda is the appointed TSAG representative.

**3.2.3.8 Open source**

Pursuant to Resolution 90 (Hammamet, 2016), TSAG RG-SC studied several contributions and liaison statements addressing open source, and collected feedback from the ITU-T study groups and obtained an overview on their activities related to open source.

TSAG liaised with ISO/IEC 1 on open source, and contributed to the ISO/IEC JTC 1/AG3 survey on open-source software.

**3.2.3.9 Collaboration with UPU**

TSAG supported ITU-T SG17 to be seeking ITU-T A.5 qualification of UPU so that ITU-T A.25 could be applied for incorporation of UPU S68 in a draft Recommendation ITU-T X.upu.

**3.2.3.10 Strengthend collaboration with oneM2M**

TSAG, through SG20, took efforts to strengthen collaboration with oneM2M, where a draft submission and maintenance process for oneM2M specifications incorporated as ITU-T Recommendations is under development (see [TSAG-LS43](https://www.itu.int/net/itu-t/ls/ls.aspx?isn=26456)).

**3.2.3.11 Collaboration with IETF and IRTF**

TSAG recognized importance for collaboration among IETF, IRTF, and ITU-T, and forwarded the IETF liaison report to all ITU-T study groups.

**3.2.3.12 Collaboration on ITS Communication Standards (CITS)**

CITS was commended as an excellent model for collaboration among ITU and equal SDOs. Two ITU-T Focus Groups - Focus Group on AI for autonomous and assisted driving (FG-AI4AD), and Focus Group on Vehicular Multimedia (FG-VM) - are actively involved within CITS. CITS started with five SDOs on board in 2005, and many more are now involved, while the expanded scope of CITS has also kept pace with the technological developments since then.

**3.2.3.13 Collabortion with newly ITU-T A.4/A.5/A.6 qualified organizations**

TSAG took note of the ITU-T A.4 qualification of International Association of Trusted Blockchain Applications (INATBA).

TSAG took note of the ITU-T A.5 and ITU-T A.6 qualification analysis for SAE International ([SAE](https://www.sae.org/)).

TSAG took note of the ITU-T A.5 qualification of JEDEC Solid State Technology Association ([JEDEC](https://www.jedec.org/)), of [3GPP](https://www.3gpp.org/), of Telecommunications Standards Development Society India ([TSDSI](https://tsdsi.in/)), and of [LoRa Alliance](https://lora-alliance.org/).ITU-T A.4, A.5, and A.6 qualified organizations are listed at <https://www.itu.int/en/ITU-T/extcoop/Pages/sdo.aspx>

### 3.2.4 TSAG Rapporteur Group on Strategic and operational plan (RG-SOP)

TSAG RG-SOP ([terms of reference](https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/tsag/sop/SitePages/ToR.aspx)) was a new TSAG Rapporteur Group established in this study period, and assisted TSAG to prepare and review the strategic, operational and financial plans for ITU-T, and through TSAG, gave advice to the TSB Director, to provide appropriate input for consideration of the Council Working Group on Financial and Human Resources for the elaboration of the draft strategic plan of the Union. General Secretariat presented at TSAG meetings the updated draft four-year rolling operational plans for review.

The progress report of RG-SOP from its interim meetings is contained in [TSAG-TD956](https://www.itu.int/md/T17-TSAG-210111-TD-GEN-0956), and the reports of RG-SOP during TSAG meetings are contained in TSAG-TDs [87](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-170501-TD-GEN-0087) and [131](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-180226-TD-GEN-0131).

COM6 paragraph 33 (DUBAI, 2018) on non-discriminatory international standards states that during the revision of Annex 1 to Resolution 71 (ITU Strategic Plan for 2020-2023), several administrations stressed that the term "non-discriminatory" in relation to international standards is ambiguous and could lead to different interpretations, and for those reasons is not agreeable. However, being it the original text from the PP-14, it will not be opposed in the Strategic Plan for the 2020 - 2023 period, however, when discussing the Strategic Plan for the period 2024- 2027, and especially when discussing plans in the T-sector, a wording that describes the situation and creates no ambiguity should be found. The TSAG Rapporteur Group on “Strategic Operational Plan” in its e-meeting on 9 November 2020 discussed the issues on the term "non-discriminatory", and concluded that contributions should be sent to the next TSAG meeting in order to re-open the discussion. No contributions were received.

### 3.2.5 TSAG Rapporteur Group on Standardization Strategy (RG-StdsStrat)

TSAG RG-StdsStrat ([terms of reference](https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/tsag/strategy/SitePages/Home.aspx)) was a new TSAG Rapporteur Group established in this study period, and provided TSAG with strategic information, for TSAG’s consideration in advising the Sector on strategic actions. Unlike other rapporteur groups, RG-StdsStrat has been chaired by rotation among several co-rapporteurs. The progress reports of RG-StdsStrat from its interim meetings are contained in TSAG TDs [215](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-180226-TD-GEN-0215)-R2[, 315](https://www.itu.int/md/T17-TSAG-181210-TD-GEN-0315)-R1, [[489](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0489), 675](https://www.itu.int/md/T17-TSAG-200210-TD-GEN-0675), [810-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200921-TD-GEN-0810), [951-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-0951), and [1052](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-211025-TD-GEN-1052); and the reports of RG-StdStrat during TSAG meetings are contained in TSAG-TDs [83-R4](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-170501-TD-GEN-0083), [133-R2](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-180226-TD-GEN-0133), [286](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-181210-TD-GEN-0286), [461-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-190923-TD-GEN-0461), [651](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0651), [783-R2](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200921-TD-GEN-0783), and [926-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-0926).

A call for participation was made to increase the number of members from industry in the activities of TSAG RG-StdsStrat, and to attract intensive industry participation in order to take account of latest technical trends and market needs.

The chief technology officer (CTO, CxO) group meetings, organized by the TSB Director as per Resolution 68 (Rev. Hammamet, 2016), assisted the Rapporteur Group in addressing strategic issues for the ITU-T Sector, and brought into the debates the views from the industry, as industry is the main component of ITU-T activities in the technical work. RG-StdsStrat considered the Communiqués from the CTO, CxO group meetings, and reflected topics of interest in a maintained list of hot topics, and which later was formalized as a hot topics repository (ref. [TSAG-TD846-R1](https://www.itu.int/md/T17-TSAG-200921-TD-GEN-0846/en)), and was liaised with the ITU-T study groups, and where the Rapporteur group obtained a number of hot topics underway or planned in the various study groups. Still, a number of fundamental questions remained open (ref. [TSAG RG-StdsStrat TD61](https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/tsag/strategy/_layouts/15/WopiFrame.aspx?sourcedoc=%7B2BC22F05-B5DE-42D2-A18D-DDBEB4F325E2%7D&file=TD061_Rapporteur%20analysis%20on%20Hot%20Topics%20as%20background%20information%20to%20RG-StdsStrat%20members.docx&action=default&CT=1610031292419&OR=DocLibClassicUI)), regarding the notion of hot topics, objective, process, and maintenance of such a hot topic repository. Collaboration with IEC/SEG 8 took place on their hot topic radar activities; where Mr Yoichi Maeda is the appointed TSAG representative.

The group found broader interest in developing metrics and statistics to capture and assess the current activities within ITU-T, with the purpose of identifying possible options on a strategic structural enhancement or optimization, towards strategic improvements to enhance the structure of ITU-T. The group found an agreement on the scope and way forward and was investigating together with TSB on the feasibility of automating those metrics generation for their implementation by the Bureau, where a catalogue of many feasible to implement metrics/statistics was developed for implementation by TSB; see Annex of [TSAG- TD810](https://www.itu.int/md/T17-TSAG-200921-TD-GEN-0810)-R1.

The group also studied how the work of ITU can support the SDGs (UN sustainable development goals) and how the development of Recommendations could include ‘by design’ its positive or negative impact to specific SDGs. Thus allowing the contributors and study group work to be more aware and inclusive in encompassing world wide strategic approach through a formal process. It was agreed that this work should be given a different context in the new study period.

RG-StdsStrat was investigating a proposal on having an Architecture Advisory Board (AAB) as a new strategic standardization function/entity (at ITU-T level and/or at the study group level). The learnings from this investigation allowed SG15 and SG17 to collaborate on creating a first security architecture development correspondence group (CG-SECAD).

The group received a contribution on "New IP: Shaping the Future Network" and assisted TSAG in consultations with the study groups and IAB on this new subject.

The group assisted in finalizing the terms of reference of the proposed ITU-T Focus Groups on Digital Currency including Digital Fiat Currency, and on Application of Distributed Ledger Technology.

### 3.2.6 TSAG Rapporteur Group on Working methods (RG-WM)

TSAG RG-WM ([terms of reference](https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/tsag/wm/SitePages/Home.aspx)) assisted TSAG on the review and improvement of existing working methods (including electronic working methods). The progress reports of RG-WM from its interim meetings are contained in TSAG TDs [161](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-180226-TD-GEN-0161)[, 316](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-181210-TD-GEN-0316)[, 491](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0491/en), [676](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0676), [811](https://www.itu.int/md/T17-TSAG-200921-TD-GEN-0811), [952](https://www.itu.int/md/T17-TSAG-210111-TD-GEN-0952), and [1201](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1201); and and the reports of RG-WM during TSAG meetings are contained in TSAG-TDs [85-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-170501-TD-GEN-0085), [135](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-180226-TD-GEN-0135), [288](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-181210-TD-GEN-0288), [463-R2](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-190923-TD-GEN-0463), [653](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0653), [785](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200921-TD-GEN-0785), [928- R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-0928), [1027-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-211025-TD-GEN-1027), and [1182](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1182)-R1.

WTSA-16 requested TSAG to take into account the text of paragraph 1bis.10 (in WTSA-16 Doc116[[3]](#footnote-4)) during the development of a draft revised WTSA Resolution 1 for consideration at WTSA-20 or for inclusion in Recommendation ITU-T A.1. With revised Recommendation ITU-T A.13 (2019/09), no particular types of texts have been identified for which there is no specific approval/agreement procedure already in place, other than normative and non-normative texts, and for which there would be a need to consider amendments to WTSA Resolution 1 or to Recommendation ITU-T A.1.

WTSA-16 requested TSAG to find a definition for "agreement" as applied to non-normative texts. WTSA-16 instructed TSAG to investigate further the procedures for development and agreement of non-normative texts within ITU-T and assign urgency of the issues. TSAG approved revised Recommendation ITU-T A.13 (9/2019) “Non-normative ITU-T publications, including Supplements to ITU-T Recommendations”, which contains in clause 6.2 a statement addressing agreement for non-normative documents.

WTSA-16 instructed TSAG to conduct a holistic review of document development and approval procedures across Resolution 1, Recommendation ITU-T A.1, and Recommendation ITU-T A.13, and to prepare a proposal to the next Assembly. TSAG Rapporteur Group on Working Methods is discussing contributions addressing modifications to WTSA Resolution 1, and revisions to Recommendation ITU-T A.1 (see [WTSA-C24](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-WTSA.20-C-0024) “Report of the Telecommunication Standardization Advisory Group to the World Telecommunication Standardization Assembly (WTSA-20), Part II: Draft revised Resolutions”, and [WTSA-C25](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-WTSA.20-C-0025) “Report of the Telecommunication Standardization Advisory Group to the World Telecommunication Standardization Assembly (WTSA-20), Part III: Draft revised recommendations of the ITU-T A-series”).

RG-WM assisted in 2019 in the revision of Recommendations ITU-T A.1 "Working methods for study groups of the ITU Telecommunication Standardization Sector" with essential amendments compared with the input TAP text in TSAG-R04, including requirements to expand IPR question at each meeting (clauses 1.4.6, 2.3.3.12, Appendix I i), deletion of conditional usage of contributed text (clause 3.1.6), and some editorials amendments, and of ITU-T A.13 "Non-normative ITU-T publications, including Supplements to ITU-T Recommendations", with some editorials amendments compared with the input TAP text in TSAG-R06, and collaborated with RG-SC on the revision of Recommendation ITU-T A.5 "*Generic procedures for including references to documents of other organizations in ITU-T Recommendations*"*,* and Recommendation ITU-T A.25 "*Generic procedures for incorporating text between ITU-T and other organizations*".

RG-WM completed in 2020 the revision works on the ITU-T Rapporteur and Editor’s Manual. RG-WM assisted in improvements to the *ITU-T Author’s Guide*, that TSAG approved in 2020*.*

In the context of Resolution 32 (Rev. Hammamet, 2016), RG-WM addresses Electronic Working Methods (EWM), and received at each TSAG meeting TSB’s report on Electronic working methods services and database applications which reported on newly offered tools and electronic facilities, and provided an update for the Action Items related to EWM. TSAG gave feedback with improvements on the new ITU customer relationship management (CRM) registration system. The group also took into account feedback on EWM from received liaison statements and from contributions.

RG-WM considered inputs from contributions for modifications to Recommendations ITU-T A.1, A.7, and A.8, and is considering revisions to Resolution 1 (Rev. Hammamet, 2016).

RG-WM established a new work item in A.SupplRA for a draft Supplement to ITU-T A-series Recommendations on Guidelines on the appointment and operations of registration authorities.

### 3.2.7 TSAG Rapporteur Group on Work programme and study group structure (RG-WP)

TSAG RG-WP ([terms of reference](https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/tsag/wp/SitePages/ToR.aspx)) assisted TSAG by considering issues related to work programme and study group structure for 2017-2020 study period. The group is also tasked to develop the detailed study group structure for the next study period. The progress reports of RG-WP from its interim meetings are contained in TSAG TDs [812](https://www.itu.int/md/T17-TSAG-200921-TD-GEN-0812), [954](https://www.itu.int/md/T17-TSAG-210111-TD-GEN-0954), [958](https://www.itu.int/md/T17-TSAG-210111-TD-GEN-0958), [1055](https://www.itu.int/md/T17-TSAG-211025-TD-GEN-1055/en) and [1203](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1203); and the reports of RG-WP during TSAG meetings are contained in TSAG-TDs [84](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-170501-TD-GEN-0084), [137-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-180226-TD-GEN-0137), [290](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-181210-TD-GEN-0290), [465](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-190923-TD-GEN-0465), [655-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200210-TD-GEN-0655), [787-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-200921-TD-GEN-0787), [930-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-0930), [1029-R1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-211025-TD-GEN-1029), and [1184](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1184).

**3.2.7.1 ITU-T** **study groups**

At each TSAG meeting, RG-WP considered the statistics regarding ITU-T study group work (a.k.a RevCom statistics), and accomplished a reduction of the stale work items after liaison with the ITU-T study groups.

RG-WP considered the received lead study group reports and confirmed the usefulness on concise lead study group reports.

TSAG facilitated coordination among the study groups; such as for

* SG12 and SG11 on current status of the draft Recommendation ITU-T Q.3961,
* SG11 and SG12 to coordinate and collaborate on a new work item in SG11 on the impact of counterfeit mobile devices on quality of service (TR-CF-QoS),
* SG3 and SG12 to coordinate on economic and policy issues pertaining to Quality of Service (QoS) and Quality of Experience (QoE),
* co-located meetings between Q4/17 and Q16/13 for quantum-related work items;

and requested SG11 to refrain from developing a new work item on the impact of counterfeit mobile devices on Quality of Service (TR-CF-QoS); and on other cross-cutting issues among the study groups.

TSAG allocated the unused ITU-T Y.1550-series to SG12.

**3.2.7.2 Establish/revise/terminate Questions**

TSAG has reviewed, proposed amendments as necessary, and endorsed new and revised Questions at every TSAG meeting. In summary, in this study period TSAG endorsed:

− creation of new

• Question 12/3 "Tariffs, Economic and Policy Issues Pertaining to Mobile Financial Services (MFS) ";

• Question 13/3 "Study of Tariff, Charging Issues of Settlements Agreement of Trans-multi-country Terrestrial Telecommunication Cables";

• Question QA/9 "Accessibility to cable systems and services";

• Question 5/16 "Artificial intelligence-enabled multimedia applications" with modifications;

• Question 12/16 "Visual surveillance systems and services";

• Question 22/16 "Distributed ledger technologies and e-services";

• Question 23/16 "Digital culture-related systems and services";

• Question 13/17 "Security aspects for Intelligent Transport System";

• Question 14/17 "Security aspects for Distributed Ledger Technologies";

− revisions to

• Question 7/3 "International mobile roaming issues (including charging, accounting and settlement mechanisms and roaming at border areas)";

• Question 6/5 "Achieving energy efficiency and smart energy";

• Question 7/5 "Circular economy including e-waste";

• Question 9/5 "Climate change and assessment of information and communication technology (ICT) in the framework of the Sustainable Development Goals (SDGs)";

• Question 1/9 "Transmission and delivery control of television and sound programme signal for contribution, primary distribution and secondary distribution";

• Question 4/9 "Guidelines for implementations and deployment of transmission of multichannel digital television signals over optical access networks and Hybrid Fibre-Coaxial (HFC)";

• Question 6/9 "Functional requirements for residential gateway and set-top box for the reception of advanced content distribution services";

• Question 9/9 "Requirements, methods, and interfaces of the advanced service platforms to enhance the delivery of sound, television, and other multimedia interactive services over integrated broadband cable networks";

• Question 19/13 "End-to-end cloud computing management, cloud security and big data governance";

• Question 20/13 "IMT-2020: Network requirements and functional architecture";

• Question 21/13 "Network softwarization including software-defined networking, network slicing and orchestration";

• Question 12/15 "Transport network architectures";

• Question 18/15 "Broadband in-premises networking";

• Question 2/17 "Security architecture and framework";

• Question 4/17 "Cybersecurity";

• Question 5/17 "Countering spam by technical means";

• Question 6/17 “Security aspects of telecommunication services, and networks and Internet of Things";

• Question 8/17 "Cloud computing and Big data infrastructure security";

• Question 1/20 "End to end connectivity, networks, infrastructures, interoperability and Big Data aspects related to IoT and SC&C";

• Question 2/20 "Requirements, capabilities and use cases across verticals";

• Question 3/20 "Architectures, management, protocols and Quality of Service";

• Question 4/20 "e/Smart services, applications and supporting platforms";

• Question 5/20 "Research and emerging technologies, terminology and definitions";

• Question 6/20 “Security, Privacy, Trust, and Identification for IoT and SC&C";

• Question 7/20 “Evaluation and assessment of Smart Sustainable Cities and Communities";

− merger of

* Question 1/9 "Transmission of television and sound programme signal for contribution, primary distribution and secondary distribution" and Question 3/9 "Digital programme delivery controls for multiplexing, switching and insertion in compressed bit streams and/or packet streams";
* Question 18/12 "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" into Q19/12 "Objective and subjective methods for evaluating perceptual audiovisual quality in multimedia and television services", and to disband Question 18/12
* Question 7/15 "Characteristics of optical components and subsystems" and of Question 6/15 "Characteristics of optical systems for terrestrial transport networks" into renamed Question 6/15 "Characteristics of optical components, subsystems and systems for optical transport networks";
* Question 18/15 "Broadband in-premises networking" and Question 19/15 "Requirements for advanced service capabilities over broadband cable home networks";
* Question 15/15 "Communications for smart grid" and Question 18/15 "Broadband in-premises networking" into renamed Q18/15 "Technologies for in-premises networking and related access applications";

− deletion of

* Question 10/5 "Adaptation to climate change and low cost and sustainable resilient information and communication technologies (ICTs)";
* Question 18/12 "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";
* Question 3/15 "Coordination of optical transport network standards";

− disbanding of

Question 9/15 "Transport network protection/restoration" and moving responsibility for

* packet-based protection to Question 10/15 "Interfaces, interworking, operation, administration and maintenance (OAM) and equipment specifications for packet-based transport networks";
* circuit-based protection and generic protection to Question 11/15 "Signal structures, interfaces, equipment functions, and interworking for optical transport networks";
* and restoration using SDN to Question 12/15 "Transport network architectures".

For reasons of business continuity of the ITU-T Sector during the COVID-19 pandemic, and as per Resolution 1 (rev. Hammamet 2016) Section 7.2, TSAG endorsed at its January 2021 meeting the set of all new or revised ITU-T study group Questions for all ITU-T study groups as announced in TSAG Reports 12 – 22.

TSAG considered the inputs from the ITU-T study groups on Resolution 2 (Rev., Hammament, 2016) (See [TSAG-TD1310](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1310)).

**3.2.7.3 Joint Coordination Activities**

TSAG regularly reviewed the JCAs and either created JCAs, endorsed the continuation of the following JCAs (with updated terms of reference as appropriate), and terminated JCAs.

TSAG endorsed

* the creation of the JCA on multimedia aspects of e-services in SG16,
* the creation of the JCA on IMT-2020 in SG13, and TSAG supported the continuation of JCA-IMT2020 through the year 2021 with the revised Terms of Reference, and endorsed the continuation of JCA-IMT2020 through the year 2022 under the name *Joint Coordination Activity on IMT-2020 and Beyond* (JCA-IMT2020);
* the continuation of JCA-SDN with revised terms of reference (in SG13);
* the continuation of JCA-IdM (in SG17), JCA-COP (in SG17), JCA-IoT and SC&C (in SG20),

and closed the JCA on technical aspects of telecommunication networks to support the Internet (JCA-Res178).

TSAG created new ITU-T Joint Coordination Activity on digital COVID-19 certificate (JCA-DCC) under the patentship of TSAG with terms of reference approved.

RG-WP further considered the reports from the Collaboration on ITS Communication Standards (CITS) and ITS-related activities.

**3.2.7.4 Review of study group structure for WTSA-20**

RG-WP received some initial feedback and some inputs from the study groups and their plans and preliminary proposed Question texts. RG-WP considered several contributions that proposed principles for restructuring of ITU-T study groups, and initial restructuring proposals. The high-level restructuring principles and various restructuring proposals were collected and consolidated. TSAG liaised the material with the ITU-T study groups and the regional organizations.

RG-WP compiled the proposals from the ITU-T study groups for their proposals on Resolution 2 including Question texts, mandates and lead study group functions for WTSA-20.

There was wide support and general thrust at TSAG for maintaining the current study group structure at WTSA-20, yet transfer of Questions or Work items from one SG to another SG could be considered at WTSA-20. However, TSAG recognized the need to conduct a thorough analysis of the feasibility of revising the study group structure before WTSA-24.

From 18 January until 25 October 2021, TSAG (RG-WP) operated a correspondence group on ITU- T study group restructuring that aimed at developing an action plan for the analytical study of ITU-T study group restructuring towards WTSA-24 taking into account, inter alia, already available contributions on principles for restructuring. The report of the Correspondence Group is contained in [TSAG-TD1077](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-211025-TD-GEN-1077), and the resulting action plan in [TSAG-TD1078](https://www.itu.int/md/T17-TSAG-211025-TD-GEN-1078/en) (“Draft F”). The action plan was finalized and sent to WTSA in further discussed at the TSAG RG-WP interim meeting 22-23 November 2021. The updated version is given in [TSAG-TD1237](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1237).

## 3.3 ITU-T Focus Groups under the parent-ship of TSAG

### 3.3.1 ITU-T Focus Group on Digital Currency including Digital Fiat Currency (FG-DFC)

ITU-T Focus Group on Digital Currency including Digital Fiat Currency (FG-DFC) was created by TSAG in May 2017 with terms of reference in [TSAG R1 Annex C](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0001); (TSAG extended the lifetime once), and terminated after it concluded its work in June 2019. FG-DFC established a forum for dialogue among players in the banking, fintech and telecom sectors to share information, best practices, develop a series of deliverables and showcasing innovations, requirements for network infrastructure and standards in the area of central bank issued digital currency. The final report of this Focus Group is contained in [TSAG-TD476](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0476). FG-DFC produced seven technical reports which were transferred in [TSAG-LS25](https://www.itu.int/net/itu-t/ls/ls.aspx?isn=22345) to ITU-T SG3, SG16, and SG17 for further consideration:

* Reference Documentation for governance related aspects for digital fiat currency;
* Digital Currency Implementation Checklist for Central Banks;
* Regulatory Challenges and Risks for Central Bank Digital Currency;
* Taxonomy and definition of terms for DFC;
* Reference Architecture and Use Cases for Central Bank Digital Currency;
* Protection Assurance for Digital Currencies;
* Protection Assurance Use Case for a Payment Transaction.

### 3.3.2 ITU-T Focus Group on Application of Distributed Ledger Technology (FG-DLT)

ITU-T Focus Group on Application of Distributed Ledger Technology (FG-DLT) was created by TSAG in May 2017 with terms of reference in [TSAG R1 Annex D](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0001), (TSAG extended the lifetime once), and terminated after it concluded its work on 1 August 2019. The final report of this Focus Group is contained in [TSAG-TD475](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0475). FG-DLT produced eight deliverables (five technical Reports, and three technical specifications) which were transferred in [TSAG-LS24](https://www.itu.int/ifa/t/2017/ls/tsag/sp16-tsag-oLS-00024.docx) to ITU-T SG16, and SG17 for further consideration:

* DLT terms and definitions
* DLT overview, concepts, ecosystem
* DLT standardization landscape
* DLT use cases
* DLT reference architecture
* Assessment criteria for DLT platforms
* DLT regulatory framework
* Outlook on DLTs.

### 3.3.3 ITU-T Focus Group on Digital Financial Services (FG-DFS)

TSAG considered the final report in [TSAG-TD36](https://www.itu.int/md/T17-TSAG-170501-TD-GEN-0036) of ITU-T Focus Group on Digital Financial Services (FG-DFS) and its results, which concluded its work in December 2016, and which produced 28 technical reports:

* The Digital Financial Services Ecosystem;
* Enabling Merchant Payments Acceptance in the Digital Financial Ecosystems;
* Role of Postal Networks in Digital Financial Services;
* Regulation in the Digital Financial Services Ecosystem;
* Merchant Data and Lending;
* Review of National Identity Programs;
* Impact of Social Networks on Digital Liquidity;
* Digital Financial Services Glossary;
* Bulk Payments and the DFS Ecosystem;
* B2B and the DFS Ecosystem;
* Impact of Agricultural Value Chains on Digital Liquidity;
* Over the counter transactions: A threat to or a facilitator for digital finance ecosystems?;
* DFS Ecosystem recommendations from FG DFS recommendations report;
* Security Aspects of DFS;
* DFS Vendor Platform Features;
* Mobile Handset Use in DFS;
* Identity and Authentication;
* Competition Aspects of DFS;
* Distributed Ledger Technologies and Financial Inclusion;
* Technology evolution and innovation in DFS;
* Technology, Innovation and Competition recommendations from FG DFS recommendations report;
* Cooperation frameworks between Authorities, Users and Providers for the development of the National Payments System;
* The Regulator’s Perspective on the Right Timing for Inducing Interoperability;
* Payment System Oversight and Interoperability;
* Payment System Interoperability and Oversight: The International Dimension;
* Access to payment infrastructures;
* Interoperability recommendations from FG DFS recommendations report;
* Review of DFS User Agreements in Africa: A Consumer Protection Perspective;
* QoS and QoE Aspects of Digital Financial Services;
* Commonly identified Consumer Protection themes for Digital Financial Services; and
* Consumer experience and protection recommendations from FG DFS recommendations report.

TSAG transferred in [TSAG-LS5](https://www.itu.int/ifa/t/2017/ls/tsag/sp16-tsag-oLS-00005.docx) the 28 technical reports and 85 recommendations of ITU-T FG-DFS on Digital Financial Services for action to ITU-T SG2, SG3, SG12, SG16 and SG17.

### 3.3.4 ITU-T Focus Group on Quantum Information Technology for Networks (FG-QIT4N)

After considerable debate, TSAG, at its 4th meeting, established new ITU-T Focus Group on Quantum Information Technology for Networks (FG-QIT4N) under its parentship with terms of reference in [TSAG – R 8 Annex C](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-R-0008). TSAG considered the final report of FG-QIT4N in [TD1192](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1192), with nine deliverables:

* QIT4N terminology: Network aspects of quantum information technologies;
* QIT4N use cases: Network aspects of quantum information technologies;
* Standardization outlook and technology maturity: Network aspects of quantum information technologies;
* QIT4N terminology: Quantum key distribution network;
* QIT4N use cases: Quantum key distribution network;
* Quantum key distribution network protocols: Quantum layer;
* Quantum key distribution network protocols: Key management layer, QKDN control layer and QKDN management layer;
* Quantum key distribution network transport technologies;
* Standardization outlook and technology maturity: Quantum key distribution network.

TSAG transferred in [TSAG-LS46](https://www.itu.int/ifa/t/2017/ls/tsag/sp16-tsag-oLS-00046.docx) the deliverables outputs of ITU-T FG-QIT4N for action to ITU- T SGs 11, 13, 15, 17, and other study groups.

### 3.3.5 Other ITU-T Focus Groups

TSAG took note of of the activities of

* the ITU-T Focus Group on Machine Learning for Future Networks including 5G (FG- ML5G), and of the concluded ITU-T Focus Group on IMT-2020 (FG IMT-2020), both under the parent-ship of SG13;
* ITU-T Focus Group on Data Processing and Management to support IoT and Smart Cities & Communities (FG-DPM) under the parent-ship of SG20;
* ITU-T Focus Group on Environmental Efficiency for Artificial Intelligence and other Emerging Technologies (FG-AI4EE) under the parent-ship of SG5, and provided feedback on the scope;
* organized an information session on the activities of ITU-T Focus Group on Technologies for Network 2030 (FG-NET2030), and Future Vertical Communications Networks and Protocols (FVCN);
* ITU-T Focus Group on Artificial Intelligence for Natural Disaster Management (FG- AI4NDM) under the parent-ship of SG2;
* ITU-T Focus Group on Autonomous Networks (FG-AN) under the parent-ship of SG13;
* ITU-T Focus Group on Artificial Intelligence (AI) and Internet of Things (IoT) for Digital Agriculture (FG-AI4A) under the parent-ship of SG20;

## 3.4 Other results of TSAG

### 3.4.1 ITU-T Standardization Committee for Vocabulary (SCV)

In accordance with Resolution 67 (Rev. Hammamet, 2016), the ITU-T Standardization Committee for Vocabulary (SCV) has responsibility for ensuring that the standardization of work on vocabulary within ITU-T shall be based on the proposals by the study groups in the English language and places further emphasis on a unified approach to terminology harmonization covering the whole of ITU. The SCV is comprised by experts in the various official languages and members designated by interested administrations and other participants in the work of ITU-T, as well as the rapporteurs for vocabulary of the ITU-T study groups, and relevant ITU staff.

TSAG appointed Ms Rim Belhaj, Tunisia, as chairman of the ITU-T Standardization Committee for Vocabulary. The SCV Chairman provided regular reports to TSAG on progress made in SCV in support of Resolution 67. TSAG was informed that SCV had decided to reach out to all ITU-T study groups to request them to bring all new definitions to the committee before approval.

At its 2017 session, the ITU Council approved [Resolution 1386](https://www.itu.int/md/S17-CL-C-0127/en) of 26 May 2017, which creates the ITU Coordination Committee for Terminology (CCT), co-chaired by the chairman of the SCV and the chairman of the ITU-R CCV. The CCT is composed by SCV, the ITU-R Coordination Committee for Vocabulary (CCV) and two representatives of ITU-D.

SCV meetings are held jointly with the CCV, and now with the participation of ITU-D, under the umbrella of the Coordination Committee for Terminology, increasing the collaboration among the three Sectors, and enhancing the efficiency for the harmonization of terms and their definitions.

TSAG and SCV collaborated on the matter of neutral and inclusive language, and it was recognized that inclusive language usage should be consistent across the Union and should be addressed at the Council level.

### 3.4.2 Intellectual Property Rights

TSAG discussed IPR issues related to electronic working methods, and ITU copyright authorization practices and the implementation of Resolution 66 (Rev. Guadalajara, 2010), and considered in a special session issues on copyright. TSAG took note of the Statistics on ITU-T Recommendations and patent declarations.

During the study period, TSAG sought advice, thorough the TSB Director, from the Director’s IPR-Adhoc group on IPR issues related to the revision of Recommendations ITU-T A.1, A.5 and A.25 as well as the provision of informational/educational material on open source licences, or alternatively, software licensing models.

At the request of the TSB Director, the TSB Director’s IPR Adhoc group met several times to address the concerns of TSAG.

The November 2017 meeting of the IPR AHG was preceded by a joint ITU-T-NGMN workshop on open source and standards. The meeting focused its discussions on the benefits, challenges and possible way forward regarding the interaction between ITU-T and open source communities. The report of the meeting can be found in [IPR-TD254](https://www.itu.int/dms_ties/itu-t/oth/04/02/T04020000280001PDFE.pdf).

The Group met again in Geneva in January 2019. On this occasion the discussions focused on issues related to standard-essential patents, open-source software and IPR issues related to Recommendations ITU-T A.1, ITU-T A.5 and especially ITU-T A.25. The meeting report can be found in [IPR-TD262](https://www.itu.int/dms_ties/itu-t/oth/04/02/T04020000290001PDFE.pdf).

The issue regarding the A-series Recommendations was addressed in several virtual meetings of the IPR AHG. The results of those meetings are contained in progress report [IPR-TD263](https://www.itu.int/dms_ties/itu-t/oth/04/02/T040200002A0001PDFE.pdf). See also [IPR- TD263R2](https://extranet.itu.int/ipr-adhoc/_layouts/15/WopiFrame.aspx?sourcedoc=%7B9456CE14-DAF8-4D23-BAAE-ECD238B6CB59%7D&file=IPR-TD-263R2%20%20IPR%20AHG%20Secretariat.docx&action=default&CT=1638284171473&OR=DocLibClassicUI) on the group’s website (TIES protected).

The next meeting of the Group took place on 7 December 2021 to address concerns regarding the boilerplate text on IPR present in the cover pages of A-series Recommendations, and a proposal to modify the marks guidelines; the meeting report can be found in [TSAG-TD1251](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1251).

### 3.4.3 WTSA action plan, PP action plan

TSAG noted at every meeting TSB’s "WTSA-16 Action Plan" which is a monitoring and reporting tool to keep track of the implementation of WTSA Resolutions. Likewise, TSAG took note of a newly developed action plan for monitoring and tracking progress in the implementation of the Resolutions from the 2018 Plenipotentiary Conference.

### 3.4.4 Bridging Standardization Gap (BSG), cooperation with ITU Regional Offices, and Sustainable Development Goals (SDGs)

TSAG noted at every meeting the TSB reports on "Bridging the Standardization Gap – Achievements and Planned Activities", and received from TSB an overview of the activities carried out under the purview of Resolution 44 (Rev. Hammamet, 2016).

TSAG recognized the importance of regional groups formed in compliance with Resolution 54 (Rev. Hammamet, 2016) and their role in implementing the Resolution 44 (Rev. Hammamet, 2016) on bridging the standardization gap. TSAG recognized the importance of close interaction and cooperation between regional groups and regional organizations, and close cooperation with the ITU Regional Offices and Area Offices. TSB in collaboration with BDT is conducting regular conference calls with the ITU Regional Offices to coordinate events and activities in order to avoid duplication of work.

TSAG received the contribution of the ITU Regional Offices to the implementation of the ITU-T four-year rolling operational plan as requested by the Resolution 25 (Rev. Dubai 2018) of the ITU Plenipotentiary Conference.

TSAG discussed several contributions addressing BSG and language issues.

TSAG took note of the updated ITU roadmaps for WSIS Action Lines C2, C5 and C6. TSAG, in RG-StdsStrat is considering usage of the Sustainable Development Goals (SDGs) in the context of the work of the Sector, within study groups and Questions.

### 3.4.5 Academia, Kaleidoscope, ITU-T Journal

TSAG noted the reports from the annual ITU Kaleidoscope events; TSB provided evaluations of the papers of the Kaleidoscope events with respect to relevance in ITU activities.

TSAG took note of the planned issues of the *ITU Journal: ICT Discoveries.*

### 3.4.6 Meeting Plan

At each meeting, TSAG examined and endorsed the meeting calendar for study groups and working parties for the coming years.

### 3.4.7 International Telecommunication Regulations (ITRs)

TSAG collected inputs from the study groups on their activities and any relevant background information on the implementation of the 2012 International Telecommunication Regulations (ITRs) and provided the material through the TSB Director to the ITU Council Expert Group on ITR (EG-ITR).

### 3.4.8 Accessibility

In addition to the activities of JCA-AHF under the parentship of TSAG (see clause 2.1.4), TSAG recognized the strategic importance of accessibility, and advised the TSB Director to take into necessary action [TSAG-TD1014](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-210111-TD-GEN-1014) "Enhancing accessibility awareness in the ITU", which describes an approach to improve accessibility awareness and coordination within ITU, and for the TSB Director to raise this issue of accessibility as being of priority to Council, ISCG, and to ISC-TF.

Support was given to the proposal to create a new division or entity within the Union on accessibility, and interest was expressed to be working together and taking serious efforts for seeking the necessary budget lines in support of such plans.

TSAG supported to forster accessible meetings ([TSAG-LS50](https://www.itu.int/ifa/t/2017/ls/tsag/sp16-tsag-oLS-00050.docx)), and nominated Ms Andrea Saks (G3ict, United States) as ITU-wide coordinator on accessibility in ISCG.

ANNEX 1

List of Recommendations, Supplements and
other materials produced or deleted during the study period

The list of new and revised Recommendations approved during the study period is found in Table 7.

The list of Recommendations determined/consented at the last meeting of TSAG is found in Table 8.

The list of Recommendations deleted by TSAG during the study period is found in Table 9.

The List of Recommendations submitted by TSAG to WTSA-20 for approval is found in Table 10.

Tables 11 onwards list other publications approved and/or deleted by TSAG during the study period.

TABLE 7
TSAG – Recommendations approved during the study period

| Recommendation | Approval | Status | TAP/AAP | Title |
| --- | --- | --- | --- | --- |
| ITU-T A.1 | 2019-09-27 | revised | TAP | Working methods for study groups of the ITU Telecommunication Standardization Sector |
| ITU-T A.5 | 2019-09-27 | revised | TAP | Generic procedures for including references to documents of other organizations in ITU T Recommendations |
| ITU-T A.13 | 2019-09-27 | revised | TAP | Non-normative ITU-T publications, including Supplements to ITU T Recommendations |
| ITU-T A.25 | 2019-09-27 | revised | TAP | Generic procedures for incorporating text between ITU-T and other organizations |

TABLE 8
TSAG – Recommendations consented/determined at the last meeting

| Recommendation | Consent/Determination | TAP/AAP | Title |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 9
TSAG – Recommendations deleted during study period

| Recommendation | Last version | Withdrawal date | Title |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 10
TSAG – draft Recommendations submitted to WTSA-20

| Recommendation | Proposal | Title | Reference |
| --- | --- | --- | --- |
| ITU-T A.1 | MOD | Working methods for study groups of the ITU Telecommunication Standardization Sector | [WTSA-20 C-0025 Appendix I](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-WTSA.20-C-0025)([TSAG-TD1244](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1244)) |
| ITU-T A.5 | MOD | Generic procedures for including references to documents of other organizations in ITU T Recommendations | [WTSA-20 C-0025 Appendix I](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-WTSA.20-C-0025)([TSAG-TD1241-R5](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1241)) |

TABLE 10bis
draft Resolutions submitted to WTSA-20

| Resolution | Proposal | Title | Reference |
| --- | --- | --- | --- |
| 1 | MOD | Rules of procedure of the ITU Telecommunication Standardization Sector | [WTSA-20 C-0024 Appendix I](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-WTSA.20-C-0024)([TSAG-TD1244](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1244)) |
| 20 | MOD | Procedures for allocation and management of international telecommunication numbering, naming, addressing and identification resources | [WTSA-20 C-0024 Appendix I](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-WTSA.20-C-0024)([TSAG-TD1233](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1233)) |
| 29 | MOD | Alternative calling procedures on international telecommunication networks | [WTSA-20 C-0024 Appendix I](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-WTSA.20-C-0024)([TSAG-TD1233](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1233)) |
| 67 | MOD | Use in the ITU Telecommunication Standardization Sector of the languages of the Union on an equal footing | [WTSA-20 C-0024 Appendix 1](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-WTSA.20-C-0024)([TSAG-TD1230att2](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T17-TSAG-220110-TD-GEN-1230)) |

TABLE 11
TSAG – Supplements

| Recommendation | Date | Status | Title |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 11bis
TSAG – Appendices

| Recommendation | Date | Status | Title |
| --- | --- | --- | --- |
| ITU-T A.23 Appendix II | 14 January 2022 | New | Collaboration with ISO and IEC on information technology – Appendix II: Best practices |

ANNEX 2

Summary of outcomes for TSAG Rapporteur Group on Creation, Participation and Termination of Regional Groups (RG-CPTRG)

## 1 Terms of Reference of RG-CPTRG

The Rapporteur Group on Creation, Participation and Termination of Regional Groups (RG- CPTRG) functioned under the Terms of Reference, which can be also be found in [TSAG-TD429-R2](https://www.itu.int/md/T17-TSAG-181210-TD-GEN-0429), and which was approved by TSAG after the first two meetings.

RG-CPTRG was formed by TSAG after discussions on contributions below:

TABLE 12
TSAG RG-CPTRG input contributions

|  |  |  |
| --- | --- | --- |
| *C* | *Source* | *Title* |
| [TSAG-C55](https://www.itu.int/md/T17-TSAG-C-0055) | GSMA | TSAG to progress ITU Plenipotentiary 2018 Proposal on rights and obligations of the various categories of membership and participation in the work of ITU-T |
| [TSAG-C56](https://www.itu.int/md/T17-TSAG-C-0056) | United States of America | TSAG's role in clarifying the criteria for the creation of, participation in, and termination of regional groups of Study Groups |
| [TSAG-C61](https://www.itu.int/md/T17-TSAG-C-0061) | Brazil | Proposal for TSAG to establish an ad-hoc group to clarify criteria for creation, participation and termination of regional groups |

TSB presented [TSAG-TD427](https://www.itu.int/md/T17-TSAG-181210-TD-GEN-0427) containing information on the governing texts on the creation and participation in ITU-T Regional groups and provided a list of Regional Groups of ITU-T SGs.

## 2 Meetings of RG-CPTRG

The Rapporteur Group met at the following TSAG meetings.

TABLE 13
TSAG RG-CPTRG meetings

|  |  |  |
| --- | --- | --- |
| *Meeting Date & Time* | *Agenda* | *Report* |
| Wednesday, 12 December 2018, 14:55PM to 16:00PM | [TSAG-TD428](https://www.itu.int/md/T17-TSAG-181210-TD-GEN-0428) | [TSAG-TD284](https://www.itu.int/md/T17-TSAG-181210-TD-GEN-0284) |
| Thursday 13 December 2018, 14:30PM to 15:45PM |
| Wednesday, 25 September 2019, 16:15PM to 17:57PM | [TSAG-TD452](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0452) | [TSAG-TD453](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0453) |
| Tuesday, 11 February 2020, 9:30AM to 10:50AM | [TSAG-TD644](https://www.itu.int/md/T17-TSAG-200210-TD-GEN-0644) | [TSAG-TD645](https://www.itu.int/md/T17-TSAG-200210-TD-GEN-0645) |

TSB organized Adobe Connect and Interprefy for remote participation. TSB also organized captioning and interpretation to the 6 UN languages for RG-CPTRG meetings. There were no interim meetings.

## 3 Chronology of activities and input documents

After the approval of the ToR of the Rapporteur Group, it was agreed to send [TSAG-LS18](https://www.itu.int/ifa/t/2017/ls/tsag/sp16-tsag-oLS-00018.doc) to all ITU-T Study Groups with regional groups (SG2; SG3; SG5; SG11; SG12; SG13; SG17; SG20) to request the following information:

1. Year of creation of each Regional Group;
2. Number of Member States who requested and supported the creation of the Regional Group;
3. The criteria of creation for a Regional group;
4. The approved Term of Reference for the Regional Group as well as the Questions of the Study Group the Regional Group contributes to;
5. The criteria for participation in the Regional Groups and how cases, if any, of participation of Member States and Sector Members from outside the region are considered;
6. Any request for termination of an existing Regional group and criteria for termination, if any.

In reply to TSAG-LS18, RG-CPTRG received incoming liaison statements from seven (7) study groups through TSAG as presented below:

TABLE 14
TSAG RG-CPTRG incoming liaison statements

| *TD* | *Source* | *Title* |
| --- | --- | --- |
| [TSAG-TD581](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0581) | ITU-T Study Group 2 | LS/r on TSAG requirement in relation to creation, participation and termination of Regional Groups (reply to TSAG-LS18) [from ITU-T SG2] |
| [TSAG-TD513](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0513) | LS/r on creation, participation and termination of Regional Groups (reply to TSAG - LS18) [from ITU-T SG2] |
| [TSAG-TD540](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0540) | ITU-T Study Group 3 | LS/r on creation, participation and termination of Regional Groups (reply TSAG-LS18) [from ITU-T SG3] |
| [TSAG-TD562](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0562) | ITU-T Study Group 5 | LS/r on creation, participation and termination of Regional Groups (reply to TSAG-LS18) [from ITU-T SG5] |
| [TSAG-TD519](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0519) | ITU-T Study Group 11 | LS/r on creation, participation and termination of Regional Groups (reply to TSAG-LS18) [from ITU-T SG11] |
| [TSAG-TD541](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0541) | ITU-T Study Group 12 | LS/r on creation, participation and termination of Regional Groups (reply to TSAG-LS18) [from ITU-T SG12] |
| [TSAG-TD510](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0510) | ITU-T Study Group 17 | LS/r on Regional Groups [from ITU-T SG17] |
| [TSAG-TD551](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0551) | ITU-T Study Group 20 | LS/r on creation, participation and termination of Regional Groups (reply to TSAG-LS18) [from ITU-T SG20] |

At the third meeting, the Rapporteur also presented [TSAG-TD621](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0621), which contains a compilation of information on the creation, participation and termination of regional groups as received from the study groups. The Rapporteur suggested that [TSAG-TD621](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0621) could be considered as the received facts from study groups to clarify the current criteria for the creation of, participation in, and termination of regional groups of ITU-T Study Groups to address part of the first objective of the terms of reference.

The following contributions were also received for the meeting:

TABLE 15
TSAG RG-CPTRG contributions

| *C* | *Source* | *Title* |
| --- | --- | --- |
| [TSAG-C79](https://www.itu.int/md/T17-TSAG-C-0079) | GSMA | Suggestions for the work of TSAG RG-CPTRG: participation of Sector Members in regional study group meetings Sept 2019 |
| [TSAG-C80](https://www.itu.int/md/T17-TSAG-C-0080) | United States of America | Observations and suggestions for the work of TSAG RG-CPTRG |
| [TSAG-C90](https://www.itu.int/md/T17-TSAG-C-0090) | Brazil | Legal clarifications concerning the role of TSAG in the creation of regional groups of ITU-T Study Groups, and the rights of participation of sector members, associates and academia |

ITU Legal Affairs Unit (LAU) submitted [TSAG-TD577](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0577) to address clarifications concerning the role of TSAG in the creation of regional groups of ITU-T Study Groups, and the rights of participation of sector members, associates and academia.

At the final meeting of the Rapporteur Group, the liaison statement with details below was also received:

TABLE 16
TSAG RG-CPTRG incoming liaison statement

|  |  |  |
| --- | --- | --- |
| *TD* | *Source*  | *Title* |
| [TSAG-TD707](https://www.itu.int/md/T17-TSAG-200210-TD-GEN-0707) | ITU-T Study Group 12 Regional Group for Africa (SG12RG-AFR) | LS/i on draft Report RG-CPTRG on creation, participation and termination of Regional Groups |

Two contributions were received from the United States of America for the final meeting:

TABLE 17
TSAG RG-CPTRG contributions

|  |  |  |
| --- | --- | --- |
| *C* | *Source* | *Title* |
| [TSAG-C113](https://www.itu.int/md/T17-TSAG-C-0113) | United States of America | Suggestions to continue to advance the work of TSAG RG-CPTRG |
| [TSAG-C115](https://www.itu.int/md/T17-TSAG-C-0115) | United States of America | CITEL DIAP on regional groups of ITU-T Study Groups (revisions to WTSA Resolution 54) |

## 4 Summary of discussions and outcomes

|  |  |
| --- | --- |
| *Objective 1* | To clarify the current criteria for the creation of, participation in, and termination of regional groups of ITU-T study groups and the mechanisms which govern those criteria, with guidance from the ITU, as appropriate. |

The meetings discussed the current criteria for the creation of regional groups of ITU-T study groups and agreed that there are discrepancies and no homogeneous criteria to create a regional group across study groups.

The term “region” is undefined as some Member States are restricted to attend Regional Group meetings in what could be considered as their ITU Administrative region. Some Member States belong to more than one Regional Group in a study group.

While some members expressed the need of a definition of a “region”, other Members communicated the priority of maintaining flexibility on the term “region” for each study group to create regional groups depending on the subject matter.

Some members expressed the importance of maintaining the status quo of limiting full participation in regional group meetings to Member States and Sector Members in a region. Similarly, they emphasized the need of a regional dialogue for specific topics depending on the mandate of the study group. In contrast, other members stressed the importance of providing access to international organizations present in the region to the regional dialogue.

From the discussions at the fourth meeting, the RG-CPTRG was informed that Study Group 3 Regional Group for Europe and the Mediterranean Basin (SG3RG-EURM) has been dormant for more than two study periods.

The meeting discussed the pathways of whether the creation of Regional Groups should be treated like Questions approved by TSAG in between WTSAs or to keep the status quo where Regional Groups are approved like Working Parties at parent study groups.

The ITU Legal Affairs Unit is of the view that by granting parent study groups the authority to develop and approve terms of reference and working methods of regional groups, WTSA provided parent study groups with the necessary authority to create regional groups in the areas of concern to them. This interpretation is confirmed by the long-standing practice of the parties.

The meeting agreed on a WTSA decision on the governance mechanism.

|  |  |
| --- | --- |
| *Objective 2* | To review WTSA-16 Resolution 1, WTSA-16 Resolution 2, WTSA-16 Resolution 22 and WTSA-16 Resolution 54, in order to discuss and revise, as appropriate, to clarify the criteria for the creation and termination of regional groups and to present a report to TSAG. |

The meeting noted [TSAG-C115](https://www.itu.int/md/T17-TSAG-C-0115) on CITEL DIAP on regional groups of ITU-T study groups (revisions to WTSA Resolution 54) was shared by United States of America for information to the meeting as the revisions were still under discussions at CITEL.

The meeting agreed that contributions and proposals to modifications to relevant Resolutions be discussed at WTSA-20.

|  |  |
| --- | --- |
| *Objective 3* | In the context of Article 3 of the ITU Constitution, to review WTSA-16 Resolution 1, WTSA-16 Resolution 2, WTSA-16 Resolution 22 and WTSA-16 Resolution 54, in order to discuss and revise, as appropriate, to clarify the criteria for participation in regional group meetings and to present a report to TSAG. |

The ITU Legal Affairs Unit is of the view that Member States and Sector Members that do not belong to the region concerned have the right to attend the relevant regional meetings in an observer capacity.

ITU LAU was additionally requested to clarify why [TSAG-TD577](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0577) omitted to provide an opinion with respect to regional intergovernmental organizations, intergovernmental organizations operating satellite systems, as well as regional and other international telecommunication standardization, financial or development organizations, as these are identified in Nos. 269B, 269C and 231 of the ITU Convention. ITU LAU explained that the provisions in question do not establish separate ITU membership categories for these organizations and that TSAG-TD577 examined participatory rights only with respect to the existing possibilities for participation in the activities of the Union, as these are laid down in the basic texts: Member States (Article 2 of the Constitution), Sector Members (Article 3 of the Constitution), Associates (No. 241A of the Convention) and Academia (Resolution 169 of the Plenipotentiary Conference). Therefore, under the present framework, the right of said organizations to participate in the work of regional groups of ITU-T study groups depends on their affiliation to ITU-T.

## 5 Conclusion

The RG-CPTRG meeting on Tuesday, 11 February 2020 agreed that the objectives under the terms of references have been satisfied and that there are no additional meetings required. The fourth meeting agreed to submit this report to TSAG as per the ToR and for the closure of RG-CPTRG.

Appendix I to to WTSA-20 document 23

DRAFT Action plan for the analysis of ITU-T Study group restructuring

## I.1 Introduction

This action plan initiates a thorough review of ITU-T potential restructuring options, based on empirical analysis, with a view to having a more effective, efficient, fit-for-purpose, forward-looking and inclusive ITU-T. It focuses on the concrete way to proceed with the analysis of ITU-T structure with a view to potentially approving restructuring at WTSA-24, rather than simply discussing general high-level principles.

The text in this action plan is based on contributions received from Members provided through a correspondence group (CG) activity based on the mandate that was agreed at the January 2021 TSAG meeting and continued under the auspices of the TSAG Rapporteur Group on Work Programme and Study Group Structure (RG-WP).

## I.2 Background

The efforts of the proposal, “Food for thought”, from Director TSB on Study Groups’ restructuring for WTSA-20 preparations provided the impetus for discussion amongst TSAG participants for the possible future re-structuring of the ITU-T study groups (SGs). It is considered as a positive step for developing the work of the sector and ensuring the compliance of technology evolution and the business continuity of the sector’s work in all circumstances as well as accelerating the work in order to come up with the best recommendations and desired standards from the sector.

A number of TSAG members recognized the importance of considering the structure of ITU-T study groups because it has not changed significantly since 2008 yet technology has advanced.

A number of TSAG members identified the need for a study that calls for an examination of the ITU-T’s standardization functions to ensure that the ITU-T structure supports the standardization needs of the membership and the industry at large.

## I.3 Information required to analyse the restructuring (principles and metrics)

The ITU-T SG restructuring solution should contribute to the mission and long-term activities of ITU-T. The restructuring options that are reviewed should provide input into the discussion by the ITU-T members. In turn, the discussion by members will require output from the implementation of the action plan, in order to assist them by providing a set of general criteria for the evaluation of ITU-T SG restructuring.

The review process will consider both quantitative metrics and qualitative policy-oriented questions. The main information required to assess each of the restructuring options will be based primarily on the principles and agreed metrics by the ITU membership.

### I.3.1 Principles

The seven high-level principles generated by WTSA-16 and their detailed explanation (see TD457-R2 Annex A and TD937-R1) should be used in the consideration of the benefits of each of the potential re-structuring options in the output of the action plan.

The seven high level principles listed are as follows:

1. Optimised structure
2. Clear mandates
3. Enhanced co-ordination and co-operation
4. Cost effectiveness and attractiveness
5. Efficient and productive working methods
6. Timely identification of standardisation needs
7. Support for bridging the standardisation gap

Other considerations include:

1. Standards should be developed with the necessary expertise and background needed to ensure a substantive outcome.
2. Care should be taken to avoid duplication of standardization work between ITU-T study groups, and, in accordance with Resolution 71 (Rev. Dubai, 2018) of the ITU Plenipotentiary Conference, to minimize to the extent possible, conflicting ITU standards with those of other global standards development organisations (SDOs). Note, however, that studying the relations of ITU-T with other SDOs in the restructuring process should not overlap with the work carried out in other TSAG Rapporteur Groups such as Strengthening Cooperation or Working Methods.
3. Is the current number a stable number, and if there is a proposal to create a new study group, should the total number be maintained?
4. What is the appropriate number of Questions within Study Groups in order to facilitate engagement and participation by members, as well as efficiency in work item allocation among questions?
5. Should standardisation of new and emerging technologies be integrated into existing study groups and merged into Questions through the revision of existing Questions and the establishment of new work items, where appropriate, or establishing new Questions?
6. Any change to ITU-T structure must take into consideration the impact on the permanence and continuity of the work of the study groups and regional groups to continue the creation of high-quality, demand-driven, efficient, cost-effective and timely Recommendations.

### I.3.2 Metrics required

This action plan aims to guarantee the availability of data and indicators making it possible to propose a T-sector structure that carries value for its members while analysing the availability of their expertise for a better allocation.

The action plan will utilise the following initial data gathered from the period 2008 through 2021. These metrics may be supplemented by additional data deemed useful to answer and analyse the stated questions.

The use of the metrics listed should serve as the basis to collect and analyse data based on the metrics in order to provide input into the answers to the questions listed.

The analysis of these questions and metrics, as well as the underlying data and methodologies used, shall be presented to TSAG for decision and any action, as appropriate.

1. What are the measures of ITU-T’s standardization activities for development of Recommendations?
	1. participation, contribution and leadership by types of membership from 2008 to 2021 for each study group and related subgroups
	2. number of months elapsed between introduction and approval of Recommendations by Study Groups from 2008 and 2021
	3. number of liaison statements from other standardization organizations during 2008 and 2021
	4. number of Recommendations approved using traditional approval process from 2008 to 2021
	5. number of Recommendations approved using alternative approval process from 2008 to 2021
	6. number of test suites developed for ITU-T Recommendations from 2008 to 2021
2. What value do ITU-T’s Recommendations add or have impact on the ITU Membership?
	1. number of unique downloads by Recommendation from 2008 to 2021
	2. number of ITU-T Recommendations incorporated or adopted by other standardization organizations from 2008 to 2021number of standards essential patents first in ITU-T Recommendations from 2008 to 2021
	3. number of ITU-T Recommendations, Guidelines and Reports with policy or regulatory implications between 2008 to 2021
	4. number of ITU-T Recommendations cited in Sector Members’ press releases and documentation from 2008 to 2021
	5. number of ITU-T Recommendations adopted and implemented fully or partially by industry from 2008 to 2021
3. How does ITU-T cooperate and coordinate with other standardization organizations?
	1. number of liaison statements sent to other standardization organizations from 2008 to 2021
	2. number of memoranda of understanding with other SDOs
	3. number of joint workshops or activities with other SDOs
	4. number of standards from other SDOs incorporated or adopted by ITU-T from 2008 to 2021 separated by field/subject
	5. number of liaison officers from or to other SDOs
	6. other mechanisms to collaborate (e.g., JCAs, invited experts)
4. Is the current structure of Study Groups conducive to the standardization process of the rapid pace of telecommunication/ICT technology development?
5. Do ITU-T’s study groups reflect the international nature of the activity?
	* 1. Number of participants (Member States, Sector Members, Associates, Academia, SMEs, and others (e.g. UN organizations, SDOs)
		2. Number of different members, sector members and associates that have committed to contributing actively to the introduction of new work, as shown in the A.1 and A.13 justifications[[4]](#footnote-5)
	* by country
	* by region
	* by membership category
		1. Number of contributions to a work item from
	* supporters
	* others (by country, by region, by membership category)

The set of metrics raise fundamental questions over the work of the Telecommunication Standardization Sector, and the extent to which these questions can be answered by the action plan will influence the potential structure of the study groups. Many of the questions and issues raised are valid and are relevant in wider discussions than study group (re-)structuring.

In progressing this action plan, it is necessary:

* to more clearly define the KPIs / metrics to be collected
* to establish priorities on the various KPIs / metrics to be collected, if necessary
* to define a timeline when the KPIs / statistics should be implemented, and
* to work within the available funding.

## I.4 Options for restructuring

The initial options to be considered in the implementation of this action plan are listed in TD995r1. However, other options remain open as and when they arise, including future submissions to be identified. The initial range of options can range from do nothing to a radical overhaul of the current ITU-T study group structure. In other words, this study should evaluate all possible restructure options and not to be limited to options listed in TD995r1.

There have already been submissions previously to past TSAG meetings throughout 2020 on options for study group restructuring at WTSA 20. These submissions have been specifically included in the annexes to this action plan. It was not part of this action plan to decide which option should or should not be included, but to treat each option fairly and equitably.

In implementing this action plan, transparency, fairness, impartiality, and objectivity should be ensured. The problems existing in the current ITU-T SGs’ structure, which need and could be solved by restructuring, should be identified, collected, and analysed objectively in the order of priority and urgency. All problems, once identified, should be prioritized with a clear understanding of which are to be solved in near future and which can be addressed at a later time.

## I.5 Application of the information to the analysis

The analysis should take into consideration the metrics that have been identified to answer the following questions:

1. How do the various restructure options look at ensuring the sustainability of study groups and raising future productivity in extracting the required recommendations and standards faster than the current situation?
2. Do the current structure and work program of the ITU-T Study Groups meet the current and future industry demand? If no, what actions are needed?
3. Do ITU-T Study Groups work collaboratively and complement each other to develop joint outputs? How can complementary work be enhanced?
4. What are the impacts of each restructuring option in terms of financial and human resources?
5. What are the advantages and disadvantages of all the proposals, especially when merging the study groups, in terms of balance between the capacity of each study groups and not increasing the current burden, and also in terms of questions, meeting schedules and ensuring the sufficiency of the number of periodic meetings of the study groups?
6. To the extent an intergovernmental organization like the ITU can be assessed in terms of competitive advantages, what are the competitive advantages that ITU-T has, and how can ITU-T utilize these advantages?

There should be a number of options employed to assess each restructuring option including benchmarking, gap analysis, SWOT analysis and brainstorming sessions.

## I.6 Time scales

The following timeline and process should be followed:

* Following TSAG approval of the present action plan, TSAG reports to WTSA-20 with the proposed list of questions (①②③ in timeline)
* WTSA-20 approves list of questions and provides guidance (④ in timeline)
* Data is gathered and analysed (⑤ in timeline)
* TSAG reviews the relevant underlying data, methodologies and analysis and recommendations based on the findings for further action and consideration (⑤in timeline)
* TSAG submits a report to WTSA-24 concerning a possible restructure of ITU-T (⑥⑦in timeline)

The timeline is indicated below.

 

Figure I.1 – Timeline

This action plan should be executed between WTSA-20 (Q1 2022) – WTSA-24.

TSAG has the ultimate responsibility to manage and review the output of the action plan. TSAG should prepare a report and recommendations for presentation to Council for further action and consideration and submit a report to WTSA-24. That said, Members can use (or not) the output of the action plan as they wish ahead of any consideration by WTSA on a decision for restructuring the ITU-T study groups.

The main responsible coordination point for this action plan should remain with TSAG. The analytics team, with very clear and specified tasks, should include ITU membership with support from TSB.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Four additional TSAG meetings were organized in the extended study period due to the COVID-19. [↑](#footnote-ref-2)
2. PP-18 invites the World Telecommunication Standardization Assembly to review, in the context of Article 3 of the ITU Constitution, and revise, as appropriate, WTSA Resolution 1, WTSA Resolution 2, WTSA Resolution 22 and WTSA Resolution 54 to clarify the criteria for creation, participation and termination of regional groups of Study Groups, and the role of TSAG in this regard. the work of RG-CPTRG [↑](#footnote-ref-3)
3. **[1*bis*.10** If there is no specific approval/agreement procedure for a text and consensus at the study group meeting is not achieved, in exceptional circumstances, in accordance with the General Rules of conferences, assemblies and meetings of the Union, the same process used at a WTSA, as described in 1.13 above, shall be used.] [↑](#footnote-ref-4)
4. While the general period of study is agreed to be from 2008 through 2021, it is recognized that the data related to the A.1 and A.13 justifications are available only from a subset of these years. Care should be taken in drawing conclusions from these data. [↑](#footnote-ref-5)