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| **Radiocommunication Advisory Group** | C:\Users\murphy\AppData\Local\Temp\Temp1_ITU logo Entire package.zip\jpg\ITU official logo_blue_RGB.jpg |
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|  | **Revision 1 toAddendum 1 toDocument RAG/26-E** |
| **23 February 2021** |
| **Original: English** |
| Director, Radiocommunication Bureau |
| report TO the twenty-EIGHTH meeting of the radiocommunication advisory group |
| STUDY GROUPS ACTIVITIES |

# 1 Working methods

Study Groups (SGs) activities were pursued within a stable Study Groups and Working Parties (WPs) structure with some modifications to take into account the decisions of the First Session of the Conference Preparatory Meeting for WRC-23 (CPM23-1). Working methods were satisfactorily applied in accordance with Resolution ITU‑R 1 and the associated Guidelines for the working methods, which were updated in 2020.

# 2 Access to meeting documents

In line with the provisions of Resolution ITU‑R 1, meeting documents are posted by SGD staff within one working day “as received” on a webpage established for this purpose, and the official versions are posted on the website within three working days.

# 3 Electronic working facilities

There is continuing emphasis on the use of electronic facilities, which has brought considerable benefit to delegates as well as a significant reduction in paper consumption.

## 3.1 SharePoint website

Access to documentation during meetings via a dedicated SharePoint website is the standard practice.

SharePoint sites for Correspondence and Rapporteur Groups are also used extensively in the periods between the WP meetings.

## 3.2 File synchronization

The file synchronization facility has been updated for all SG/WP meetings to facilitate access to the most recent versions of documents during meetings and to the meeting room assignments.

## 3.3 Online list of participants

Online versions of the lists of participants for all SGs and WPs meetings have been implemented with access to the online version restricted to TIES users. The dynamic list can be searched based on parameters such as name, member and position in the delegation.

## 3.4 Remote participation /Virtual meetings

Due to the exceptional circumstances caused by the Coronavirus (COVID-19) outbreak, it was decided to prioritize the need to ensure the health and safety of all participants and to guarantee adequate levels of participation. Therefore, all the meetings of the ITU-R SGs and their WPs, including Task Group (TG) 6/1, have been held fully virtual as of April 2020 up to the present date.

All the meeting arrangements have been made in agreement with the respective ITU-R SGs management teams. ITU Member States have been consulted whether the SGs and WPs meetings could be convened fully electronically and whether the SGs meetings could be conducted exceptionally in English only.

The Bureau has investigated which platform(s) could best respond to the needs of the SGs and WPs meetings and identified “GoToWebinar” and “GoToMeeting” as the platforms to be used for these meetings. Following further development and alignment of the electronic tools at ITU level, platforms like Zoom or Interprefy have also been used, when the situation permitted such use.

Taking into consideration that technical problems may happen at any time during the virtual meetings and in response to the Radiocommunication Advisory Group (RAG)’s request, each WP has identified one or two Vice-Chairmen, who would follow-up closely on the work of their respective Groups and should be ready to take over the role of the Chairman, if needed.

Audio webcasts of all available languages have been provided during the plenary sessions of all SGs and WPs meetings.

As a result of the time zones associated with the geographical locations of the participants of these virtual meetings and the need to observe acceptable working hours, these working hours were severely limited compared to those of in-person meetings. Due to this time limitation during the virtual meetings, a large number of Correspondence Groups (CGs) have been newly established to progress the work between meetings. Rapporteur Groups (RGs) and Inter-Sector Rapporteur Groups (IRGs) continue their activities.

## 3.5 Study Group webpages

In alignment with the ITU policy, updates to webpages are continuously performed in order to provide necessary information to delegates.

The list of CGs/RGs can be found on each SG main page under a specific link and they are aligned for all SGs.

Following the link for each CG/RG, the user can access the information about the group name, the SharePoint page, the Rapporteur/Chairman/Convener, the mailing list, the archive, etc. and other necessary information.

## 3.6 Captioning

Since December 2013, all SG meetings have been provided with live captioning in English. Feedback on this facility has been generally positive because it is also an aid to delegates in following discussions. However, the accuracy of the captioning, particularly with respect to frequency bands, radiocommunication acronyms and delegate names tends to be poor.

# 4 Participation

There has been a considerable increase in the level of participation in ITU-R SGs and WPs meetings since 2003 particularly, in 2020 when all meetings have been held electronically. This is very encouraging, but at the same time it might create some difficulties if those numbers are used to estimate future participation in in-person meetings. Since April 2020, due to the pandemic (COVID‑19) all the meetings have been held fully virtual, which facilitates the participation resulting in a larger number of delegates who have been able to attend the work of the various SGs and their WPs.

Participation in the largest groups can now exceed 600. The average participation per meeting is now of the order of 216 participants (see Figure 1 below).

Figure 1

General average participation to ITU-R Study Group/
Working Party meeting per year since 2003

\* Higher values corresponding to a year with fewer meetings but with more participants, e.g., CPM‑2.

\*\* Higher values corresponding to a year where most of the meetings have been held electronically.

# 5 Meeting rooms

The shortage of meeting rooms at ITU Headquarters continues to hinder the effective planning of meetings. This problem has been exacerbated by the following factors:

– the increased number of meetings being arranged by all of the Sectors and the General Secretariat;

– the shortage of meeting rooms with a capacity of more than 120 participants;

– the need to respect the required 2 meters of physical distance policy, which involves that the maximum occupancy of all conference rooms has been altered;

– the need to avoid overlap and clashes of meeting dates;

– the limited availability and very long lead times required for bookings in alternative facilities, such as CICG.

Consequently, in the coming years an increasing number of meetings will need to be held at other locations outside ITU or as a mixture of minimal physical and remote participation. To that end, offers from the membership to host SGs/WPs meetings during this period will be particularly welcome, if the situation associated with the pandemic allows. In the longer term, the requirements for meeting rooms at ITU premises will need to be carefully taken into account in the design of the Varembé 2 building.

# 6 Activities in the Study Groups

Some of the activities and other ongoing standardization studies in each SG are described below. The table below summarizes the ITU-R SGs status of studies carried out since RAG-20 as well as the production of Recommendations and Reports approved since then.

| Study Group | Status of studies |
| --- | --- |
| Recommendations ITU-R approved | Reports ITU-R approved | Questions ITU-R approved |
| SG 1 | SM.2138-0, SM.1392-3 | SM.2130-2, SM.2405-1 |  |
| SG 3 |  | P.2345-2 |  |
| SG 4 |  |  |  |
| SG 5 | F.383-10, M.1457-15, M.1798-2, M.2150-0 | F.2484-0, M.2482-0 |  |
| SG 6 | BS.1615-2, BT.1306-8, BT.1877‑3, BT.2016‑2, BT.2073-1, BT.2075-3, BT.2111-2, BT.2136-0, BT.2137-0  | BS.2214-5, BT.2207-5, BT.2245‑8, BT.2246-7, BT.2254-4, BT.2343-6, BT.2386-3, BT.2420-1, BT.2470-1 | 143-2/6 |
| SG 7 |  |  |  |

## 6.1 Study Group 1

SG 1 is continuing to develop ITU-R Recommendations, Reports and Handbooks related to spectrum management principles and techniques, general principles of sharing, spectrum monitoring, long-term strategies for spectrum utilization, economic approaches to national spectrum management, automated techniques and assistance to developing countries in cooperation with the Telecommunication Development Sector. Its studies also include methods for identification and elimination of interference, maintenance of data dictionary, spectrum redeployment, spectrum use measurement, unlicensed and shared uses of spectrum, dynamic spectrum access, smart grids and wireless power transmission.

The last e-meeting of SG 1 and its WPs 1A, 1B and 1C was held in November-December 2020. As a result, one new and one revised ITU-R Recommendations were developed and subsequently adopted and approved. The meeting also approved two revised ITU‑R Reports.

Taking into account suggestions made by the RAG meeting in May 2020 and Chairmen/Vice‑Chairmen meeting in June 2020, WP 1A appointed a second Vice Chairmen. SG 1 endorsed this appointment and agreed with the suggestion that WP 1B and WP 1C consult the membership for the appointment of a second Vice-Chairmen.

E-meetings were also held on 28 August 2020 and 26 January 2021, respectively for the SG 1 RG on liaison with CISPR and for the WP 1C RG on performance evaluation of mobile DF units in operational environment towards a preliminary draft new Recommendation.

Recommendation ITU-R:

– SM.2138-0 “Test procedure for measuring monitoring system field strength measurement accuracy in the VHF/UHF frequency range”

– SM.1392-3 “Essential requirements for a spectrum monitoring system for developing countries”

Report ITU-R:

– SM.2130-2 “Inspection of radio stations”

– SM.2405-1 “Spectrum management principles, challenges and issues related to dynamic access to frequency bands by means of radio systems employing cognitive capabilities”

The next meetings of SG 1 and its WPs are scheduled from 25 May to 3 June 2021.

## 6.2 Study Group 3

In furthering its work on propagation measurement, data analysis, modelling and prediction in various parts of the spectrum up to 375 THz, thereby laying the foundation for the design of radiocommunication systems and the assessment of interference, SG 3 continues to revise or develop new recommendations, reports and handbooks under its purview. SG 3 and its working parties also continue to provide assistance to all other ITU-R SGs on radio wave propagation prediction aspects, most notably those relating to system design and sharing studies, the often required in support of work on WRC agenda items. One revised ITU-R Report was approved by SG 3 during its last meeting. Five ITU‑R Recommendations were also editorially amended.

The P-series recommendations remain the most popular of all ITU-R series of recommendations, which reflects its importance to all users of radio systems within the ITU and the greater radio communications community.

Report ITU-R:

– P.2345-2 “Propagation model for IF77”

The next meeting of WPs 3J, 3K and 3M is planned to be convened during the period 26-29 April 2021. The block meeting for SG 3 and its WPs is planned from 21 June to 2 July 2021.

## 6.3 Study Group 4

SG 4 is continuing to study fixed, mobile, broadcasting and radiodetermination-satellite systems and networks characteristics, air interfaces, performance and availability objectives as well as sharing of orbit/spectrum resources among GSO and non-GSO satellite systems, enabling the sustainable development of the space ecosystem.

Study Group 4 Working Parties are continuing the preparatory work for WRC-23 under the agenda items for which they are the leading groups as well as for other agenda items for which they are contributing groups.

Taking into account suggestions made by the RAG meeting in May 2020 and Chairmen/Vice‑Chairmen meeting in June 2020, WPs 4A, 4B and 4C appointed new Vice-Chairmen, two for each Working Party. SG 4 endorsed the appointment of the six Vice‑Chairmen.

The next meeting of SG 4 and its WPs is convened from 15 February to 4 March 2021.

## 6.4 Study Group 5

SG 5 is continuing studies on systems and networks for the fixed, mobile, radiodetermination, amateur and amateur-satellite services, paving the way for the continuing development of all these services, including IMT, HAPS, ITS and PPDR.

One new and three revised ITU-R Recommendations and two new ITU-R Reports pertaining to the scope of SG 5 were approved. Other than the normal revision of existing documents the WPs have worked on several studies producing relevant Reports/Recommendations. WP 5A has also approved a new edition of the Land Mobile Handbook. Moreover, Question ITU-R 101-5/5 “Quality of service requirements in the land mobile service” was editorially updated.

Recommendation ITU-R:

– M.2150-0 “Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2020 (IMT-2020)”

– F.383-10 “Radio-frequency channel arrangements for high-capacity fixed wireless systems operating in the lower 6 GHz (5 925 to 6 425 MHz) band”

– M.1457-15 “Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)”

– M.1798-2 “Characteristics of HF radio equipment for the exchange of digital data and electronic mail in the maritime mobile service”

Report ITU-R:

– F.2484-0 “Cooperative frequency competition model and the corresponding algorithms and protocols for improving the HF sky-wave electromagnetic environment”

– M.2482-0 “The outcome of the evaluation, consensus building and decision of the IMT-2020 process (Steps 4 to 7), including characteristics of IMT-2020 radio interfaces”

After the achieved finalisation of the IMT-2020 Specifications (Recommendation ITU-R M.2150), ITU-R WP 5D has started the work towards “IMT towards 2030 and beyond”, by requesting inputs from External Organisations about future technology trends.

The next meeting of WP 5D will be from 1-12 March 2021. WPs 5A and 5C are scheduled to meet from 28 April to 11 May 2021 and WP 5B meeting is planned from 10-21 May 2021. SG 5 meeting is planned in November/December 2021, depending on whether the meeting will be virtual or physical.

## 6.5 Study Group 6

SG 6 is continuing studies on radiocommunication broadcasting, particularly on emerging topics including advanced technologies for terrestrial digital broadcasting, a global platform for the broadcasting service, high dynamic range television (HDR-TV), integrated broadcast-broadband (IBB) systems, new audio and video codecs for digital broadcasting, Advanced Immersive Audio‑Visual (AIAV) systems, renderer specifications for advanced sound systems, application of Artificial Intelligence for broadcasting, audio‑visual accessibility (AVA), and preparation for WRC‑23 agenda items or issues related to broadcasting services.

SG 6 has also been actively coordinating the work of mutual interest with ITU-T SGs 9 and 16 through Intersector Rapporteur Groups (IRGs) on Audio-Visual Accessibility (IRG‑AVA) and Integrated Broadcast-Broadband (IRG-IBB).

Two new and seven revised ITU-R Recommendations; one revised ITU-R Question; and nine revised Reports were approved. SG 6 also decided to suppress five ITU-R Questions and nine ITU-R Recommendations. Finally, ten ITU-R Recommendations were editorially updated.

Question ITU-R:

– 143-2/6 “Advanced Immersive Sensory Media Systems for Programme Production, Exchange and Presentation for Broadcasting”

Recommendation ITU-R:

– BT.2136-0 “Assessing interference into digital terrestrial television broadcasting from other services by means of Monte Carlo simulation”

– BT.2137-0 “Technologies applicable to Internet Protocol (IP) interfaces for programme production”

– BS.1615-2 ““Planning parameters” for digital sound broadcasting at frequencies below 30 MHz”

– BT.1306-8 “Error correction, data framing, modulation and emission methods for digital terrestrial television broadcasting”

– BT.1877-3 “Error-correction, data framing, modulation and emission methods and selection guidance for second generation digital terrestrial television broadcasting systems”

– BT.2016-2 “Error-correction, data framing, modulation and emission methods for terrestrial multimedia broadcasting for mobile reception using handheld receivers in VHF/UHF bands”

– BT.2073-1 “Use of high efficiency video coding for UHDTV and HDTV broadcasting”

– BT.2075-3 “Integrated broadcast-broadband system”

– BT.2111-2 “Specification of colour bar test pattern for high dynamic range television systems”

Report ITU-R:

– BS.2214-5 “Planning parameters for terrestrial digital sound broadcasting systems in VHF bands”

– BT.2207-5 “Accessibility to broadcasting services for persons with disabilities”

– BT.2245-8 “HDTV and UHDTV including HDR-TV test materials for assessment of picture quality”

– BT.2246-7 “The present state of ultra-high definition television”

– BT.2254-4 “Frequency and network planning aspects of DVB-T2”

– BT.2343-6 “Collection of field trials of UHDTV over DTT networks”

– BT.2386-3 “Digital terrestrial broadcasting: Design and implementation of single frequency networks (SFN)”

– BT.2420-1 “Collection of usage scenarios and current statuses of advanced immersive audio-visual systems”

– BT.2470-1 “Use of Monte Carlo simulation to model interference into DTTB”

SG 6 and its WPs meetings are scheduled from 15 to 26 March 2021.

**6.6 Study Group 7**

SG 7 is continuing to develop ITU-R Recommendations, Reports and Handbooks that are used for development and for ensuring non-interference into the operation of space operation, space research, Earth-exploration and meteorological systems (including the related use of links in the inter-satellite service), radio astronomy and radar astronomy; and for the dissemination, reception and coordination of standard-frequency and time-signal services (including the application of satellite techniques) on a worldwide basis.

The systems addressed by SG 7 are used in activities that are a critical part of our everyday life such as:

– global environment monitoring – atmosphere (including greenhouse gases emissions), oceans, land surface, biomass, *etc*.;

– weather forecasting and climate change monitoring and prediction;

– detection and tracking of many natural and man-made disasters (earthquakes, tsunamis, hurricanes, forest fires, oil leaks, etc);

– providing alerting/warning information;

– damage assessment and planning relief operations.

WPs 7A, 7B, 7C and 7D will meet from 15-23 April 2021 and SG 7 will meet in September 2021.

## 6.7 Coordination Committee for Vocabulary

The Coordination Committee for Vocabulary (CCV) is continuing to assist in ensuring the consistency among the various ITU-R terms and definitions, filter all the proposals coming from the Radiocommunication Study Groups and validate the terms and definitions before introducing them into the ITU terminology database.

After the adoption of Council Resolution 1386, “ITU Coordination Committee for Terminology (ITU CCT)”, the ITU CCT meetings are conducted with extensive use of electronic methods. Work is on‑going on improvements to the ITU terminology database.

## 6.8 CPM

See Section 5 of Doc. RAG/26.

# 7 Liaison and collaboration with ITU‑D and ITU‑T, and with other organizations

Intersectoral activities have continued throughout the period, particularly concerning ITU’s priority topics of climate change, emergency communications and accessibility.

*• ITU‑D*

BR continues to contribute to the BDT workshops and seminars. These events provide an opportunity to present ITU‑R’s standardization activities and, in turn, to demonstrate their contribution to Resolution 123 (Rev. Dubai, 2018) in bridging the standardization gap.

BR actively participated in the meetings of the ITU-D SGs to provide the latest development in the activities of the ITU-R SGs, as well as guidance on ITU-R Recommendations, Reports and Handbooks of particular interest to developing countries. The ITU‑D SGs were invited to consider the ITU-R information provided in order to avoid duplication of effort, and to make use of the results of work done by the ITU-R SGs.

*• ITU‑T*

In addition to climate change and emergency communications, topics of mutual interest between ITU‑R and ITU‑T include IMT-2020, the effects of human exposure to radio frequencies, power line transmission systems, smart grid, smart cities, EMC/EMI, intelligent transport systems, audio-visual media accessibility, common patent policy and intellectual property rights.

There continues to be a requirement for close coordination on the various topics being addressed by ITU‑T that have implications for radiocommunication systems to reduce the potential for overlap, duplication and conflict of work undertaken by the two Sectors.

*• Other organizations*

Healthy liaison has continued between ITU‑R SGs and other organizations, with due reference to Resolution ITU‑R 9, where required.

The Bureau continued to maintain close cooperation with international and regional organizations with the following objectives:

1. promote dialogue amongst bodies having common interests;
2. improve coordination leading to more effective preparation for events such as WRCs; and
3. keep ITU‑R abreast of relevant activities in other organizations for a more strategic planning of work programmes.

The Bureau continues its close cooperation with the relevant international and regional organizations dealing with the use of spectrum, including the Regional Telecommunication Organizations recognized by the ITU for regional coordination (APT, ASMG, ATU, CEPT, CITEL and RCC); broadcasting organizations (ABU, ASBU, EBU and HFCC); and those focused on the use of specific radiocommunication systems and services (e.g., ITSO, ESOA, GVF, GSMA) by organizing, promoting and participating in events to build capacity on the use of the Radio Regulations, including World Radiocommunication Seminars and Regional Radiocommunication Seminars.

The Bureau continues to participate in the activities of the Global Standards Collaboration (GSC). Involvement with the 3GPP and IEEE has been maintained, as well as several regional standardization organizations, given their importance and relevance to the work of SG 5. Other notable areas of liaison with Study Groups activities include those with the World Meteorological Organization, the World Health Organization, ISO and IEC (including CISPR), Space Frequency Coordination Group and several others on an ad-hoc basis.

The Bureau ensured liaison and cooperation with the UN Committee on the Peaceful Uses of Outer Space (UN-COPUOS), the International Maritime Organization (IMO), the International Mobile Satellite Organization (IMSO), Bureau International des Poids et Mesures (BIPM), the International Telecommunications Satellite Organization (ITSO), COSPAS-SARSAT, the International Committee of the Red Cross (CICR), the International Civil Aviation Organization (ICAO) with regard to the application of ITU treaty texts. BR experts also participated in various meetings of these organizations.

# 8 Other intersectoral activities

BR has actively participated in other intersectoral activities that are relevant to the work of ITU‑R SGs, as described below:

*–* Climate Change and Emergency Communications: The BR participates in the Intersectoral activities coordinated by the ITU Climate Change and Emergency Telecommunications Task Force for the implementation of Resolution 136 (Rev. Dubai, 2018). There are also studies in response to Resolution ITU‑R 60-2 (Reduction of energy consumption for environmental protection and mitigating climate change by use of ICT/radiocommunication technologies and systems).

– Accessibility: ITU-R has been actively participating in the ITU-T JCA-AHF (Joint Coordination Activity on Accessibility and Human Factors).

– Spectrum/EMC: When addressing spectrum related/EMC issues, close coordination with the relevant ITU-R groups is ensured before liaising with external organizations on those issues, particularly where well-established and efficient collaboration between ITU-R and those organizations already exists.

– Preparation for and participation at ITU meetings: BR is continuing its participation in the activities related to the major ITU events, conferences and meetings and their preparation in relation to the work of the ITU-R SGs. These activities are in support of the Plenipotentiary Conference, the ITU Council, WTSA, WTDC, WSIS and ITU TELECOM World.

## 9 Follow-up actions requested by RAG at its meeting in 2020

In response to RAG’s requests at its 2020 meeting as contained in the Summary of Conclusions (Administrative Circular [CA/252](https://www.itu.int/md/R00-CA-CIR-0252/en)), BR SGD has implemented the following actions:

## 9.1 Categorization of new and revised Resolutions adopted by previous W(A)RCs

During its last meeting in April 2020, the RAG considered Doc. [RAG-20/11](https://www.itu.int/md/R20-RAG-C-0011/en) from Iran (Islamic Republic of) and the proposal on categorizing new and revised Resolutions adopted by previous W(A)RCs and taking consequential actions.

The Bureau has categorized all the W(A)RC Resolutions in force after WRC-19 within one or more of the six proposed categories and can be found on this [website](https://www.itu.int/en/ITU-R/study-groups/Pages/Categorization-WRC-Resolutions.aspx). Similarly, the Bureau has also categorized all the W(A)RC Recommendations and they are published [here](https://www.itu.int/en/ITU-R/study-groups/Pages/Categorization-WRC-Recommendations.aspx).

## 9.2 Appointment of Working Parties Vice-Chairmen

Where it was not yet the case, WP Chairmen have followed the advice of RAG, as described in Section 3.4 of this document, and they have identified at least one or two Vice-Chairmen for their WPs. Their names and contact details are published in the respective websites of each WP.

## 9.3 CVC meetings

At its last meeting, the RAG invited the BR Director to hold a meeting of Chairmen and Vice‑Chairmen of SGs to consider various matters related to the functioning of their groups. Moreover, the RAG also noted that the BR can undertake training opportunities for the Chairmen and Vice-Chairmen of SGs, WPs and its subordinate groups prior to the RA-23.

### 9.3.1 Sixteenth meeting of Chairmen and Vice-Chairmen of Radiocommunication Study Groups (CVC-16)

The BR Director convened the 16th CVC meeting on 18-19 June 2020.

The first session took place on 18 June 2020 and the participation was extended to representatives of the RAG, of the CPM and of other interested parties. During this session a document, originally submitted to the RAG as Doc. [RAG/12(Rev.1)](https://www.itu.int/md/R20-RAG-C-0012/en) by Iran (Islamic Republic of) on “Principles to be considered and taken into account in studies relating to WRC 23 agenda items”, was presented, discussed and amended as contained in the Annex to Doc. [CVC/2](https://www.itu.int/md/R19-CVC-C-0002/en). This file was conveyed to all the ITU-R SGs, WPs, TG 6/1 and to the CCV for their consideration, as requested by the RAG.

The second session was held on 19 June 2020 and on this occasion, only the Chairmen and Vice‑Chairmen of the SGs and their WPs were invited to discuss the work programme, functioning and possible training opportunities for the Chairmen and Vice-Chairmen of SGs.

The summary record of the 16th meeting of the CVC can be found in Doc. [CVC/2](https://www.itu.int/md/R19-CVC-C-0002/en).

### 9.3.2 CVC Pilot Training

Following the outcomes of the 16th meeting of Chairmen and Vice-Chairmen of ITU-R SGs a fully virtual *CVC Training Pilot meeting: Briefing and guidelines for Chairmen and Vice‑Chairmen* was held on 7 December 2020. Two sessions, one in the morning and the other in the afternoon, were organized to facilitate the participation of delegates from different time zones.

Invitations to this meeting were also extended to the Chairmen and Vice-Chairmen of the Regional Groups and some Delegates who had previously expressed an interest. The meeting was attended by 83 participants (about 50% of the invited audience).

A dedicated [website](https://www.itu.int/en/ITU-R/study-groups/Pages/rcvc-training.aspx) containing all the training material has been made available.

After the meeting, a survey questionnaire was sent out to the participants requesting a feedback and inviting them to propose new subjects, their visions on how to improve this material or how this type of training should evolve in the future. The BR has taken note of all these valuable suggestions and will investigate, to the extent possible, their implementation.

The outcomes of the *CVC Training Pilot Meeting: Briefing and guidelines for Chairmen and Vice‑Chairmen* as well as the results of the survey questionnaire can be found in Doc. [CVC/3](https://www.itu.int/md/R19-CVC-C-0003/en).

### 9.3.3 Seventeenth meeting of Chairmen and Vice-Chairmen of Radiocommunication Study Groups (CVC-17)

The 17th meeting of the Chairmen and Vice-Chairmen of ITU-R SGs was held electronically on 20 January 2021. The invitation to this meeting was also extended to the Chairmen and Vice-‑Chairmen of the CPM and the RAG, as well as to the CPM Chapter (co-)Rapporteurs.

The main topics discussed during this session were related to the 2021 meetings calendar, the status of studies of each Group, the electronic working methods of CGs and the outcomes of the CVC Pilot Training. Participants also shared their experience with the current working arrangements.

The summary of the 17th meeting of the CVC can be found in Doc. [CVC/4](https://www.itu.int/md/R19-CVC-C-0004/en).

## 9.4 Guidance for addressing WRC-23 agenda items

In line with the RAG-20 summary of conclusions agenda item 6 of CA/252, in September 2020, the BR Director sent out Administrative Circular [CACE/955](https://www.itu.int/md/R00-CACE-CIR-0955/en) inviting administrations to provide technical characteristics, operational parameters and protection criteria for sharing and compatibility studies required for WRC-23.

## 9.5 Guidelines relating to Resolution ITU-R 9-6

Also, with respect to agenda item 6 of CA/252, the guidelines for the contribution of material of other organizations to the work of the SGs and for inviting other organizations to take part in the study of specific matters, which complement Resolution ITU-R 9-6, were updated and they are available [online](https://www.itu.int/oth/R0A01000002/en).

## 9.6 Capacity building activities

Under agenda item 10 of CA/252, RAG-20 invited the BR Director to continue efforts of the BR to provide assistance and capacity building.

Further details on the capacity building activities carried out during 2020, including WRS and RRSs, can be found in Section 8.2 of Doc. RAG/26.

## 9.7 Information about attendance

RAG-20 was attended by almost all the SGs, WPs and TG Chairmen and by 40% of the Vice‑Chairmen.

Chairmen and Vice-Chairmen have attended largely the meetings of their relevant Groups (SGs, WPs and TG 6/1).

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