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| **Radiocommunication Advisory GroupGeneva, 25-27 June 2012** |  |
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|  | **Addendum 2 to** |
|  | **Document RAG12-1/1-E** |
| **30 May 2012** |
| **Original: English** |

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| Director, Radiocommunication Bureau |
| report to the NINEteenth meeting of the radiocommunication advisory group |
| Study Group activities  |

**1 Working methods**

Study Group activities were pursued within a stable Study Group (SG) and Working Party (WP) structure according to the work programmes defined in the ITU-R Operational Plan. Working methods were satisfactorily applied in accordance with Resolution ITU-R 1-5 and 1-6 (and the associated Guidelines).

**2 Access to meeting documents**

In line with the revisions made to Resolution ITU-R 1 at RA-12, meeting documents are now posted by SGD staff “as received” on a webpage established for this purpose within one working day, and the official versions are posted on the website within three working days. A system to allow contributors to upload their own contributions directly to the “as received” folder is being examined.

Continuing emphasis has been placed on the use of electronic facilities that have brought considerable benefit to delegates as well as a significant economy in paper. Access to documentation during meetings via a dedicated Sharepoint website is the standard practice, with only a minimal number of paper copies being printed for meetings held in Geneva. All forthcoming Study Group and Working Party meetings will be completely paperless, as is already the case for most of the ITU-T meetings. The use of Sharepoint facilities has been extended to meetings held outside of Geneva and all such meetings are now completely paperless.

A file synchronization facility has been implemented for all Study Group/Working Party meetings to facilitate access to the most recent versions of documents during meetings.

**3 Meeting rooms**

On an increasing number of occasions, the shortage of meeting rooms at ITU Headquarters is seriously hindering the effective planning of meetings. The problem is exacerbated by the following factors:

1. the increasing number of meetings being arranged by the Sectors and the General Secretariat;
2. the shortage of meeting rooms with a capacity of around 150-200 participants;
3. the need to avoid overlap and clashes of meeting dates;
4. the limited availability and very long lead times required for bookings in alternative facilities such as CCV and CICG.

**4 List of participants**

An online version of the list of participants is planned to be introduced later this year. Access to the online version will be restricted to TIES users. The dynamic list will be able to be searched based on parameters such as name, member and position in the delegation.

**5 Interpretation**

For meetings scheduled to be held with interpretation, please note that interpretation will actually be provided only where Member States so request. Requests for interpretation should be sent to the BR Secretariat (brsgd@itu.int) at least one month before the start of the meeting. This deadline is required in order for the secretariat to make the necessary arrangements for interpretation.

**6 Remote participation**

Resolution 167 (Guadalajara, 2010) instructs the Directors of the Bureaux to take action, in consultation with the Sector advisory groups, in order to provide appropriate electronic participation or observation facilities in Sector meetings for delegates unable to attend face-to-face meetings.

Within the Radiocommunication Bureau, some large-scale trials of remote participation software were successfully conducted in ITU-R study and working group meetings in September/October 2011 and April/May 2012. These trials focused on providing an audio feed and a view of documents being edited during Plenary sessions. More advanced options such as sharing the editing of documents and full remote participation are now being investigated. Remote participation facilities were also provided during the recent SG 5 seminar. While these trials were successful, they have raised a number of procedural and technical/operational issues that require further consideration. These considerations are included in Annex 1.

For the forthcoming Study Group Plenary meetings an audio webcast of all available languages (i.e. all those that were requested – see Section 5) will be provided. It will not be necessary to register for the meeting to receive the webcast.

For the forthcoming blocks of Working Party meetings, the WP Plenaries will also offer the possibility of webcast/Adobe Connect facilities in English only. Remote participants wishing to actively participate (e.g. to introduce a contribution) will need to register for the meeting beforehand and coordinate their active participation with the responsible Counsellor. Those wishing to simply monitor the proceedings will not need to register. While the Secretariat will make every effort to facilitate such active participation, it should be recognized that on some occasions this may not be possible due to factors such as: not all meeting rooms being suitably equipped; the limited number of support staff and many parallel meetings; and the need for the remote participants to have a high quality internet and phone connection.

A report on the experience gained with these further trials will be provided to the next meeting of the RAG.

## 7 Notable activities in the Study Groups

Since the last meeting of the RAG, Study Group activities have focussed on the ongoing standardization of radicommunication systems, on finalizing texts related to WRC-12 and on initiating the studies required for WRC-15. Some of the notable activities in each Study Group are highlighted below:

* With the approval of Recommendation ITU-R SM.1896, as well as of Reports ITU-R SM.2153, SM.2154 and SM.2179, which were recognized in the revision of Resolution ITU-R 54 at RA-12, SG 1 has already successfully accomplished a certain level of harmonization of short-range devices and will continue its efforts on this subject in response to the above-mentioned resolution;
* With the approval of Report ITU-R M.2176 “Vision and requirements for the satellite radio interface(s) of IMT-Advanced”, ITU-R has commenced the process of developing ITU-R Recommendations for the satellite component of the IMT-Advanced radio interface(s). This work is guided by Resolution ITU-R 57;
* The approval of Report ITU-R S.2199 “Studies on compatibility of broadband wireless access (BWA) systems and fixed-satellite service (FSS) networks in the 3 400-4 200 MHz band” reflects the successful joint work between SGs 4 and 5 conducted by the relevant Working Parties in both Study Groups;
* Significant progress was made on the protection criteria for Cospas-Sarsat search and rescue instruments and local user terminals resulting in the approval of revised Recommendations ITU-R M.1478-2 and ITU-R 1731-2;
* Significant progress was also made on the use of MSS systems in the event of natural disasters with the approval of revised Recommendation ITU-R M.1854-1 and Report ITU-R M.2149, and approval of a series of new Recommendations ITU-R M.1901-M.1906 addressing characteristics and protection criteria associated with the radionavigation-satellite service;
* Work progressed on IMT-Advanced in accordance with the foreseen time-scales. The ITU‑R Recommendation containing the detailed technical specifications of IMT-Advanced was adopted at the SG 5 meeting in November 2011 and subsequently approved at RA-12;
* Study Group 3 introduced the Bullington diffraction method with tapered corrections to ensure a smooth transition between line-of-sight and trans-horizon paths in Recommendation ITU-R P.526-12 and consequently applied this model as a modification to Recommendations ITU‑R P.452-15, P.1812-2 and P.2001. The latter is an entirely new Recommendation that provides a wide range terrestrial radio-wave propagation model in the range 30 MHz to 50 GHz;
* In line with the new provisions of Resolution ITU-R 25-3, Study Group 3 developed four revised Recommendations (P.528-3, P.617-2, P.837-6 and P.2001) that now incorporate datasets or software that are considered part of the Recommendation;
* During the first block meeting of WP 5A, 5B and 5C in this study cycle, a one-day seminar on the WRC-15 Agenda Items of interest for the SG 5 activities was held. The seminar provided a high level view of the WRC-15 Agenda Items for which the Study Group 5 working parties are responsible for or are contributing to. The meeting permitted an open discussion of issues and ideas among about 240 participants which appreciated the initiative;
* Study Group 6 was awarded an EMMY for its work on the standardization of loudness metering for use in broadcast audio (Recommendation ITU-R 1770-2). Substantial progress was made in the areas on Three-Dimension Television (3DTV) and Ultra High-Definition Television (UHDTV) and a number of Recommendations are presently in the PSAA process. A demonstration of UHDTV was given at the ITU by NHK of Japan. The delegates participate actively in the ITU-T Focus Group on Audiovisual Media Accessibility (FGAVA).

## 8 Liaison and collaboration with ITU-D and ITU-T, and with other organisations

Inter-sector activities have been very evident throughout the period, particularly concerning ITU’s priority topics of climate change, emergency communications and accessability.

*Concerning ITU-D:* BR continues to contribute to the BDT Development Fora. These events provide an opportunity to present ITU-R’s standardization activities and, in turn, to demonstrate their contribution to Resolution 123 (Rev.Antalya, 2006) in bridging the standardization gap.

Experts from ITU-R SG 1 will continue to assist upon request in the development of the SMS4DC software application, in accordance with Resolution ITU-R 11-4.

In connection with ITU-D Study Group activities:

* BR contributed to the meeting of Rapporteur Group 9-3/2 describing the outcomes of RA-12 and WRC-12 of particular interest to developing countries;
* ITU-R WP 7C provided information to the ITU-D Rapporteur Group on Question ITU‑D 22/2 on the use of radio-based remote sensing in disaster prediction, detection and mitigation;
* ITU-R SG 1 continued its active collaboration with ITU-D Study Group 2 in the implementation of the new phase of studies falling under ITU-D Resolution 9 (Rev. Hyderabad, 2010) and, based on the newly approved Handbook on Spectrum Monitoring, ITU-R WP 1C continued to provide technical information on spectrum monitoring in support of the studies in response to Question ITU-D 23/1 on strategies and policies concerning human exposure to electromagnetic fields;
* The report on the transition from analogue to digital terrestrial broadcasting, Report ITU-R BT.2140, continues to be updated with further country related information. The Handbook on digital television (DTV) implementation is progressing and is expected to be finalized this year. This work is considered to be particularly relevant to ITU-D;
* ITU-R WP 4C provided further information to ITU-D SG 2 on the use of MSS networks in the event of natural disasters and similar emergencies.

*Concerning ITU-T:* In addition to climate change and emergency communications, topics of mutual interest between ITU-R and ITU-T include:

* ITU-T Resolution 72 on the effects of human exposure to radio-frequencies where studies in ITU-T SG 5 have been followed, particularly in ITU-R SG 1, with respect to the monitoring and measurement of electromagnetic fields;
* Further to the May 2011 ITU Forum on standardization activities on power line telecommunication (PLT) systems, where many other standardization organizations were successfully involved, ITU-R SG 1 has completed its work with the approval of Recommendation ITU-R SM.1879 and of Reports ITU-R SM.2157, SM.2158 and SM.2212, on the impact of PLT systems on radiocommunication services in the frequency bands of interest. This close cooperation with ITU-T SG 15 has continued in order to monitor the developments of PLT systems and other related standardization activities, in particular for narrow band home networking;
* Activities in ITU-T SG 13 on standards for future networks and next generation networks as well as mobility management and fixed-mobile convergence, having particularly in mind current studies in ITU-R SGs 4 and 5;
* Recent collaborative discussions with ITU-T, ISO and IEC with regard to issues related to IPR have involved the development and approval of a revised Guidelines for implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC. It was prepared by the World Standards Cooperation (WSC) Patent Task Force and contains all the revisions proposed by ITU/ISO/IEC since the adoption of the Common Patent Guidelines in March 2007, in particular clarification on the explanation of the term “Patent” and introduction of a new paragraph on “Assignment or Transfer of Patent Rights”. In addition, recent collaborative discussions with ITU-T have involved the development and approval of a revised ITU Software Copyright Guidelines;
* Activities in the ITU-T Focus Group on Audiovisual media accessibility (FG-AVA) under the umbrella of ITU-T SG16 and the ITU-T Joint Coordination Activities on Accessibility and Human Factors (JCA-AHF) addressing new technical standards to support disabled people;
* BR contributed to ITU-T SG 5 regarding ITU-R studies in climate change and also developed a brochure “Radiocommunications and Climate Change”. The brochure provides an overview of the use of radiocommunication systems to monitor the various manifestations of climate change and their impact as well as the application of ICTs and radiocommunications as a solution to contribute to a global reduction in energy consumption.

There continues to be a requirement for close coordination on a number of topics being addressed by ITU-T that impinge on radiocommunication issues to reduce the potential for overlap, duplication and conflict of work undertaken by the two Sectors.

*Concerning other organizations:* Healthy liaison has continued between the ITU-R Study Groups and Other Organisations, with due reference to Resolution ITU-R 9-3 where required. ITU-R and BR representatives have continued their active involvement in the Global Standards Collaboration (GSC). Liaison has also been evident with UN bodies and agencies in various fields, e.g. space weather, climate change and climate monitoring (WMO, UNFCCC, Global Humanitarian Forum, GEO, SFCG, NASA, ESA, JAXA) and EMF exposure (WHO).

**9          Other intersector activities**

BR has actively participated in other intersector activities, which are relevant to the work of ITU-R Study Groups, as described below.

* *World Summit on the Information Society*: Several activities were carried out in accordance with Resolution ITU-R 61 (ITU‑R’s contribution in implementing the outcomes of the WSIS), in particular to cover Action Lines C2 and C6.  In addition to the participation in the ITU WSIS Task Force, these included  the provision of Council WG‑WSIS with summaries of ITU‑R activities on implementation of the WSIS outcomes and Resolutions 140 (Rev. Guadalajara, 2010). It’s also worth noting the effective participation in the [WSIS Forum](http://groups.itu.int/Default.aspx?alias=groups.itu.int/wsis-forum2012) (Geneva, 14-18 May 2012), particularly to cover issues related to Action Line C2, as “Innovative Technologies and New Opportunities providing Access to ICT: Transition from Analogue to Digital Terrestrial TV and Digital Dividend” and Action Line C7 on “e‑environment” with a joint ITU/WMO presentation addressing climate change monitoring and disaster risk reduction;
* *Climate Change and Emergency Communications*: Intersector activities continue to be coordinated by the ITU Climate Change and Emergency Telecommunications Task Force related to the implementation of Resolutions 136 (Rev. Guadalajara, 2010), in which BR has active participation, including with relation to ITU preparations and participation at the United Nations Conference on Sustainable Development ([Rio+20](http://www.uncsd2012.org/rio20)). BR also participated in the United Nations Inter-Agency meeting on Outer Space Activities, contributing to a report on the way in which United Nations organizations use space-based technologies to address climate change. RA-12 adopted Resolution ITU-R 60 (Reduction of energy consumption for environmental protection and mitigating climate change by use of ICT/radiocommunication technologies and systems ), which will drive additional activities. In this respect, a special brochure titled “Radiocommunications and Climate Change” was prepared, which provides an overview of the use of radiocommunication systems  to monitor the various manifestations of climate change and their impact as well as the application of ICTs and radiocommunications as a solution to contribute to a global reduction in energy consumption. Activities linked to the implementation of Resolutions ITU-R 53 (The use of radiocommunications in disaster response and relief) and 55 (ITU studies of disaster prediction, detection, mitigation and relief) are being pursued in ITU-R;
* *Broadband Commission*: The ITU Broadband Commission Inter-Sectoral Group was set up in order to provide support the activities of the [Broadband Commission](http://www.broadbandcommission.org/). The role of radiocommunications, with emphasis to mobile broadband, including IMT systems, has been emphasized as an example of ICT systems able to provide timely and efficient access to broadband applications;
* *Preparation to ITU meetings*: BR has been participating in the preparatory activities related to ITU events, conferences and meetings, including Telecom World 2012, WCIT-12, WTSA-12, and WTPF-13.

Annex: 1

Annex 1

considerations on remote participation in ITU-R meetings

Several delegates have already participated remotely in ITU meetings. These include ITU-T study and working groups, workshops, ITU council working groups, ITU-D meetings and meetings of the Broadband Commission and WSIS Forum. E-participation is thus becoming an indispensable feature in ITU’s working methods.

A key benefit of e-participation is the ability to increase regional participation and provide a more enhanced representation by delegates from developing countries. In addition to providing flexibility for delegates, e-participation is an important element in business continuity, for example when meetings are interrupted by unforeseen events. Implementation will make ITU activities more inclusive and bring cost benefits primarily to the membership where travel costs, for example, are reduced.

The experience to date has raised a number of procedural and technical/operational challenges which require further consideration. These are outlined in the following sections of this Annex.

Despite the challenges, the rollout of a full remote participation programme has the potential to propel ITU ahead of other international agencies and ICT organizations, promoting the use of a technology that increases participation and has the potential to reduce travel and therefore greenhouse gas emissions.

**1 Procedural challenges**

Procedures and legal aspects which today are based on the assumption that meetings would be face‑to-face in one physical location will need to be revisited.

Challenges include determining how the [ITU General Rules of Conferences, Assemblies and Meetings of the Union](http://www.itu.int/net/about/basic-texts/rules.aspx) (Chapter II Section 11 No. 61) principle "It shall be the duty of the chairman to protect the right of each delegation to express its opinion freely and fully on the point at issue" can be satisfied in a remote participation environment.

In the event that an issue goes to the vote, there is also a need for clarification in how No.115 of the above-mentionedGeneral Rules **“**1) A majority shall consist of more than half the delegations present and voting.” should be interpreted.

Consequently, for decision-making portions of Study Group or Working Party meetings, “remote participation” at the present time is limited to remote observation and all decisions should be taken by those physically present. Considering that the major portion of ITU-R Study Group meetings are of a decision-making nature, for the time being active remote participation will be limited to ITU-R Working Party meetings only.

One challenge is how to resolve difficult questions/issues raised during a meeting by a remote participant. Traditionallysuch matters are typically addressed during “coffee break” discussions, but this option is not available with remote participation.

Another challenge is the complexity of managing both physical and remote participants. As this trend increases, chairmen may require additional training and assistance.

Moreover, with e-participation implemented more widely, meeting organizers will need to consider that delegates participate from different time zones.

**2 Technical/operational challenges with remote participation**

**Security and authentication:** The process for accreditation and authentication for
e-participation is essentially the same as for delegates who are physically present. ITU is testing several conferencing platforms that can provide the levels of authentication (linked with ITU’s authentication service, which includes TIES) required. These platforms give meeting organizers the assurance that only registered delegates can access a particular e-meeting room or e-meeting recording.

**Languages:** Initial trials have highlighted issues with audio quality making interpretation difficult.Although sufficient to allow participants, précis-writers and captioners to follow the proceedings, audio was substandard for interpretation purposes, at times making it impossible for the interpreters to render the remote participants’ inputs. The audio feeds lacked the necessary depth to allow a complete understanding of one’s speech, particularly meaningful changes in intonation, which are key to an interpreter’s comprehension and successful rendering of an intervention. Meaning was at times compromised. Until the technology has been improved and tested, and until clear audio can be fed to the interpreters, it is important to inform all parties involved about the tentative nature of this exercise and make the necessary disclaimers to protect the deliverables of interpreters.

Further trials were performed and based on the results, IS Department is optimistic that the challenge of multi-lingual support for remote participation will be addressed.

**Equipment performance:** For participants to become less dependent upon the physical meeting location they need to have confidence in the communication infrastructure. Good audio quality and high reliability remains the most critical requirement. This also remains the biggest challenge to providing interpretation.

Guidelines stipulating minimum standards for user equipment to enable satisfactory operation (e.g. minimum requirements for hardware , digital bandwidth of internet connection, use of quality headsets, reliable phone line connection) should be developed.

**Operational procedures:** Similarly, to avoid delays and disturbance during meetings, guidelines for operational procedures (e.g. speaking at dictation speed, eliminating ambient noise, instructions for use of the software) should be developed.

**Support:** In addition to the procedural support provided by the Chairman and Counsellor, there is a need for technical support to provide remote participation facilities. At present, two technical support staff are required per meeting, and the meeting room itself needs to be suitably equipped. These requirements place a limitation on the number of parallel meetings that can be provided with remote participation.

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