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| **Radiocommunication Advisory GroupGeneva, 22-24 May 2013** |  |
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|  | **Addendum 1 toDocument RAG13-1/1-E** |
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| **Original: English** |
| Director, Radiocommunication Bureau |
| report to the twentieth 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 1-6 (and the associated Working Guidelines).

A draft revision of the Working Guidelines has been prepared for consideration by RAG to take into account the changes made to Resolution ITU-R 1 at RA-12 and recent advances in electronic working methods. This draft revision has been prepared as a separate RAG document.

# 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 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

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.

## 3.1 Online document submission

A system to allow contributors to upload their own contributions directly to the “as received” webpage will be introduced later this year.

## 3.2 Sharepoint website

Access to documentation during meetings via a dedicated Sharepoint website is the standard practice. All Study Group and Working Party meetings are now completely paperless.

## 3.3 File synchronization

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. An improved synchronization tool is also being investigated.

## 3.4 Online list of participants

An online version of the RAG-13 list of participants will be introduced by early May 2013. 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. The online version of the RAG-13 list of participants will be accessible from the [RAG-13 webpage](http://www.itu.int/en/ITU-R/conferences/rag/Pages/default.aspx). Following RAG-13, online lists of participants are planned to be introduced for all ITU-R Study Group events.

## 3.5 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.

Since the last meeting of RAG, audio webcasts of all available languages have been provided during the Plenary sessions of all Study Group and Working Party meetings held in Geneva.

During the Working Party meetings, the possibility of active remote participation using Adobe Connect facilities in English only has been offered. Remote participants wishing to actively participate (e.g. to introduce a contribution) need to register for the meeting beforehand and coordinate their active participation with the responsible Counsellor.

Active remote participation was provided to allow participants in Working Parties to present contributions on ten occasions in the last year. Typically there has only been 1-2 active remote participants at a given meeting. The general feedback received has been that such participation has been useful, but that it can be difficult to schedule and that it slows the meeting down.

Active remote participation was provided during the CPM-15 Steering Committee meeting on 18 December 2012 to review the preparation of the draft CPM Report to WRC-15. The Chairmen of the ITU-R Study Groups and of the ITU-R responsible groups were also invited to attend this meeting, for which the remote participation facilities were found to be very useful.

The Coordination Committee for Vocabulary (CCV) has had very positive experiences introducing remote participation in its meetings. On 27 June 2012, three out of 11 participants were remote participants and on 16 November 2012, five out of a total of ten were remotely connected.

This facility has been found to be particularly useful for online discussions to support correspondence group activities. Five online discussion sessions were hosted in 2012, with typically 10-20 participants.

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.

## 3.6 Study Group webpages

The ITU is in the process of changing the presentation of its webpages to provide an updated and consistent look across the ITU website. The general Study Groups webpage has been changed to the new presentation format already, while the pages for each individual Study Group are being changed progressively following the Study Group block meetings to avoid disruption to the meetings.

## 3.7 Recommendations database and search facility

A database with an advanced search facility is being developed for the ITU-R Recommendations to enable recommendations to be searched and filtered by such categories as the radiocommunication service, type of radio system and applicable frequency band. A separate RAG document has been prepared describing this facility.

## 3.8 Enhanced correspondence group tool

Trials are being conducted on an enhanced tool as a replacement for the current mailing lists and ftp servers. A report on the results of these trials will be presented at the next RAG meeting.

# 4 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:

i) the increasing number of meetings being arranged by the Sectors and the General Secretariat;

ii) the shortage of meeting rooms with a capacity of more than 150 participants;

iii) the need to avoid overlap and clashes of meeting dates;

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

# 5 Notable activities in the Study Groups

Since the last meeting of the RAG, Study Group activities have focussed on the ongoing standardization of radiocommunication systems and on progressing the studies required for RA-15 and WRC-15. Some of the notable activities in each Study Group are highlighted below.

## 5.1 Study Group 1

With the approval of Recommendation ITU-R SM.2028, as well as Report ITU-R SM.2255 on RFID systems and Report ITU-R SM.2212-1 on power line telecommunication (PLT) systems, SG 1 continues its efforts on the harmonization of short-range devices in response to Resolution ITU-R 54-1, as well as on the protection of radiocommunication services against interference caused by radiation from ISM equipment in response to Resolution 63 (Rev.WRC-12) and against impact from PLT systems in response to Question ITU-R 221-2/1; SG 1 is also continuing its other core activities with, in particular, the studies on spectrum monitoring evolution and the revision of its Handbooks on National Spectrum Management and on Computer-Aided Techniques for Spectrum Management.

## 5.2 Study Group 3

SG 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 decided to apply this model as modifications to Recommendations ITU‑R P.452-14 (this is still being reviewed) and P.1812-2, and in P.2001. The latter is a 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, SG 3 developed four revised ITU-R 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.

## 5.3 Study Group 4

New and revised Recommendations and Reports pertaining to the activities of SG 4 were approved, in particular Recommendation ITU-R M.2031 on “Characteristics and protection criteria of receiving earth stations and characteristics of transmitting space stations of the radionavigation-satellite service (space-to-Earth) operating in the band 5 010-5 030 MHz”, Report ITU-R S.2261 on “Technical and operational requirements for earth stations on mobile platforms operating in non-GSO FSS systems in the frequency bands from 17.3 to 19.3, 19.7 to 20.2, 27 to 29.1 and from 29.5 to 30.0 GHz” and Report ITU-R S.2151-1 on “Use and examples of systems in the fixed-satellite service in the event of natural disasters and similar emergencies for warning and relief operations”.

With the approval of Report ITU-R M.2176-1 “Vision and requirements for the satellite radio interface(s) of IMT-Advanced” and the development of a new ITU-R Recommendation on the detailed specifications of the radio interfaces for the satellite component of IMT-Advanced, SG 4 progressed the studies related to the satellite component of IMT-Advanced. This work is guided by Resolution ITU-R 57-1.

## 5.4 Study Group 5

Seventeen Recommendations and four Reports pertaining to the activities of SG 5 were approved, some of which are in support of the activities carried out by SG 5 in relation to WRC-15 Agenda items.

During the first meeting of WP 5B in this study cycle, a half-day 79 GHz workshop on automotive radar was organized jointly with ERTICO – ITS Europe in line with preparations for WRC-15 a.i. 1.18. Speakers demonstrated to about 80 participants the progress made over the past year in developing short-range high-resolution automotive radar systems in the 79 GHz frequency band that will contribute to increased transport efficiencies and road safety. For more information, see <http://www.itu.int/dms_pub/itu-r/oth/0A/06/R0A060000540001PDFE.pdf>.

During the first meeting of WP 5D in this study cycle, a half-day workshop on Research Views on IMT Technology Evolution was held. The workshop demonstrated that technical and research development is ongoing involving IMT technologies in areas like high-density networks, machine-to-machine, device‑to‑device communications, and cloud based concepts. The meeting permitted an open discussion of issues and ideas among about 200 participants who appreciated the initiative.

## 5.5 Study Group 6

SG 6 approved key Recommendations on 3DTV programme production and international exchange, on the digital interfaces used in studios for 3DTV programme production, on the general requirements for 3DTV and on the methods to evaluate the quality of 3DTV images. A new Recommendation on the technical details for UHDTV for programme production and international programme exchange was also approved. The Study Group also produced a Recommendation on planning criteria for second generation DTTB systems and fulfilled its obligations with respect to providing JTG 4-5-6-7 with the technical characteristics and spectrum requirements for the broadcasting service in connection with the studies to be carried out under WRC-15 Agenda items 1.1 and 1.2.

SG 6 also celebrated “40 years of digital television advancements” with a ceremony on 30 October 2012, where ITU-R was presented with a plaque commemorating these achievements. At this ceremony, Prof. M. Krivocheev, the Honorary Chairman of SG 6, was congratulated on his 90th birthday and his continued involvement with all these achievements of SG 6.

## 5.6 Study Group 7

A two-day seminar for the Americas Region on “Science services: regulatory, technical and practical implications” was held in Manta, Ecuador, 20-21 September 2012. This ITU seminar provided participants with full and comprehensive information on the development of science services, focusing on the most recent studies conducted by SG 7. About 180 delegates participated in this event. For more information, see <http://www.itu.int/ITU-R/go/itu-sem-americas>.

# 6 Liaison and collaboration with ITU-D and ITU-T, and with other organizations

Intersector activities have been very evident throughout the period, particularly concerning ITU’s priority topics of climate change, emergency communications and accessibility.

*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. Guadalajara, 2010) 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 addressing ITU-R studies of particular interest to developing countries.

• BR also supported the development of a questionnaire as part of the ITU-D ICT-eye activities.

• 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). BR made a presentation at the September 2012 meeting of the Joint ITU-D/ITU-R Group on the outcomes of RA-12 and WRC-12 and on the ITU-R SG 1 ongoing activities. In addition, the ITU-R WP 1C contact 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. Work continues on the Handbook on digital television (DTV) implementation and it is expected to be finalized this year. This work is considered to be particularly relevant to ITU-D.

• ITU-R WP 4B provided information to ITU-D SG 2 on satellite broadband access technologies and the satellite component of IMT.

*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 in conjunction with ITU-D studies in response to Question ITU-D 23/1 (see above), particularly in ITU-R SG 1 with respect to the monitoring and measurement of electromagnetic fields.

• Further to the approval of Recommendation ITU-R SM.1879-1 and of Reports ITU-R SM.2157, SM.2158-2 and SM.2212-1, on the impact of PLT systems on radiocommunication services in the frequency bands of interest, ITU-R SG 1 continues its close and fruitful cooperation with ITU-T SG 15 in order to monitor the developments of PLT systems and other related standardization activities related to the coexistence of wired telecommunication with radiocommunication systems, especially as regards methodologies for analysing close range interactions in frequency bands up to 3 GHz between wired and wireless systems likely to be used in buildings and homes.

• 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.

• Activities relevant to Intelligent Transport Systems are continuously carried out by ITU-R SG 5 and ITU-T.

• Recent collaborative discussions with ITU-T, ISO and IEC with regard to issues related to IPR have involved the examination of potential areas for improvement to the Common Patent Policy for ITU-T/ITU-R/ISO/IEC and related Guidelines with respect to the availability of injunctive relief in a reasonable and non-discriminatory (RAND) context, and the meaning of “reasonable” in RAND.

• 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 ITU-R Study Groups and other organizations, 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).

# 7 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 is also worth noting the BR participation in the preparation for the [WSIS Forum](http://groups.itu.int/Default.aspx?alias=groups.itu.int/wsis-forum2012) (Geneva, 13-17 May 2013), 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 Resolution 136 (Rev. Guadalajara, 2010), in which BR has active participation, including with relation to ITU participation at the United Nations Conference on Sustainable Development ([Rio+20](http://www.uncsd2012.org/rio20)). 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 is driving additional activities. Activities linked to the implementation of Resolutions ITU-R 53-1 (The use of radiocommunications in disaster response and relief) and 55-1 (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, particularly 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 activities related to forthcoming ITU events, conferences and meetings, including Telecom World 2013, WTPF-13, WTDC-14 and PP-14.

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