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| **Radiocommunication Advisory GroupGeneva, 24-27 June 2014** |  |
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|  | **Addendum 2 toDocument RAG14-1/1-E** |
| **30 May 2014** |
| **Original: English** |
| Director, Radiocommunication Bureau |
| report to the twenty-First 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).

# 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

Development of a system to allow contributors to upload their own contributions directly to the “as received” webpage has been delayed due to lack of resources. It is hoped that this system 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

Online versions of the lists of participants for all study group meetings were introduced in May 2013. Access to the online version is restricted to TIES users. The dynamic list is able to be searched based on parameters such as name, member and position in the delegation.

## 3.5 Remote participation

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 nine 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.

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. All of the main Study Group pages have been changed to the new presentation, while the pages for each individual Working Party are being changed progressively following the relevant Study Group block meetings to avoid disruption to the meetings.

## 3.7 Further development of the ITU-R documents database search facility

A separate document (RAG14-1/9) provides information about the ITU-R documents database and search 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.

## 3.9 Captioning

Since BR started providing this service in December 2013, four events have been provided with live captioning in English, totalling six meeting days. Feedback on this facility has been generally positive as an aid to following discussions, however some concerns have been raised on occasion regarding the accuracy of the captioning particularly with respect to frequency bands and radiocommunication acronyms. It is intended to continue with trials of this facility at events such as Study Group meetings and workshops.

# 4 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:

i) the increasing number of meetings being arranged by all of 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 largely focussed on finalizing the CPM text in preparation for CPM15-2. Some of the notable activities and other ongoing standardization studies in each Study Group are highlighted below.

## 5.1 Study Group 1

SG 1 has continued its efforts on the harmonization of short-range devices (SRD) in response to Resolution ITU-R 54-1 with in particular the approval of Report ITU-R SM.2153-4 and the organization of an ITU Workshop on SRD and UWB on 3 June 2014 (see at: <http://www.itu.int/go/ITU-R/RWP1B-SRD-UWB-14>).

Another ITU Workshop was organized on 20 January 2014 to present some spectrum management issues on the use of White Spaces by Cognitive Radio Systems (see at: [www.itu.int/go/ITU-R/RWP1B-SMWSCRS-14](http://www.itu.int/go/ITU-R/RWP1B-SMWSCRS-14)). Some of those issues are now being studied in relation to the dynamic access to spectrum by radio systems employing cognitive capabilities.

Other studies on the protection of radiocommunication services against impact from power line telecommunication (PLT) systems made a good progress with the approval of Recommendation ITU-R SM. 1879-2 and Reports ITU-R SM.2158-2 and SM.2269.

Good progress was also made to provide design guidelines for the development and integration of automated spectrum management and monitoring systems, with the approval of Recommendations ITU-R SM.1370-2 and SM.1537-1, as well as with the revision of the ITU Handbook on Computer-Aided Techniques for Spectrum Management. Likewise, with the approval of new Recommendation ITU-R SM.2039 and Report ITU-R SM.2270, SG 1 provided its first deliverables in response to Question ITU-R 235/1 on spectrum monitoring evolution. Finally, studies also continued on the revision of its Handbook on National Spectrum Management.

## 5.2 Study Group 3

At its meeting in June 2013, SG 3 developed two new Recommendations ITU-R P.2040, “Effects of building materials and structures on radiowave propagation above about 100 MHz” and P.2041 “Prediction of path attenuation on links between an airborne platform and space and between an airborne platform and the surface of the Earth”, in addition to the revision of 26 recommendations. SG 3 also approved a new Report ITU-R P.2297 “Electron density models and data for transionospheric radio”, a new Handbook on ground wave propagation, a revision of the Handbook on Radiometeorology and the revision of one report, and proposed the revision of two questions and the suppression of Recommendation ITU-R P.313. New Opinion ITU-R 101, “Worldwide land cover databases” was also approved. As a result of the long lead time for the revision of handbooks, especially those under the purview of SG 3, for which the preparation and research could require several years, SG 3 approved Decision 1, which describes the electronic publication procedure of revisions to handbooks on a per chapter-basis, thus ensuring timely availability of information to the ITU membership.

In line with the provisions of Resolution ITU-R 25-3, SG 3 developed nine revised ITU-R Recommendations (P.452-15, P.531-12, P.617-3, P.678-2, P.836-5, P.839-4, P.840-6, P.1812-3 and P.2001-1) that incorporate datasets or software that are considered an integral part of the Recommendation.

In conjunction with the 8th European Conference on Antennas and Propagation (EuCAP 2014) SG 3 organized a workshop on 10 April 2014 and an exhibition on the activities of the Study Group (see [www.itu.int/go/rsg3-EuCAP14](file:///C%3A%5CDocuments%20and%20Settings%5Cmillet%5CLocal%20Settings%5CTemporary%20Internet%20Files%5CContent.Outlook%5C8J43OD8F%5Cwww.itu.int%5Cgo%5Crsg3-EuCAP14)). The workshop was well attended and representatives of universities and research institutions indicated considerable interest in cooperating with SG 3 and its Working Parties on subjects relating to radiowave propagation.

Recommendations in the P-series remain popular and statistics for the period 1 June 2013 to 31 December 2013 indicated they received the highest number of downloads (more than 880 000). This is more than double the number of downloads for the next best recommendation series for the same period of time.

## 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.2047-0 on “Detailed specifications of the satellite radio interfaces of International Mobile Telecommunications-Advanced (IMT-Advanced)”, Recommendation ITU-R S.2049-0 on “Access procedures for fixed-satellite service occasional use, transmissions to geostationary-satellite orbit space stations, in the 4/6 GHz and 11-12/13/14 GHz FSS bands”, Recommendation ITU-R S.1503-2 on “Functional description to be used in developing software tools for determining conformity of non-geostationary-satellite orbit fixed-satellite system networks with limits contained in Article 22 of the Radio Regulations”, Report ITU-R M.2279-0 on “Outcome of the evaluation, consensus building and decision of the IMT-Advanced satellite process (Steps 4 to 7), including characteristics of IMT-Advanced satellite radio interfaces” and Report ITU-R M.2278-0 on “Use of very small aperture terminals (VSATs)”.

With the approval of the above-mentioned Recommendation ITU-R M.2047-0 and Report ITU-R M.2279-0, SG 4 finalized the studies related to the satellite radio interfaces of IMT-Advanced. This work was guided by Resolution ITU-R 57-1.

## 5.4 Study Group 5

Fifteen Recommendations and thirteen 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 November meeting of WP 5A, a half-day Seminar on Cognitive Radio Systems and the use of White Spaces was organized. Speakers presented to about 150 participants the results of WRC-12 agenda item 1.19, including Res. ITU-R 58 and Rec. 76 (WRC-12). The seminar included a summary of the work on CRS being conducted in ITU-R, as well as presentations on a number of current important topics related to CRS and the use of White Spaces. For more information, see <http://www.itu.int/en/ITU-R/seminars/rsg/RWP5A-2013/Pages/default.aspx>.

During the meeting of WP 5D in February 2014, held in Ho Chi Minh City, Viet Nam, a half-day workshop on "Research views on IMT beyond 2020" was held. With around 200 particpants, the workshop presented the challenges and opportunities that IMT technologies will face in the future in areas like high-density networks, machine-to-machine, device‑to‑device communications, and cloud-based concepts. For more information, see <http://www.itu.int/ITU-R/index.asp?category=study-groups&rlink=rwp5d&lang=en>.

## 5.5 Study Group 6

SG 6 approved the revision of several key Recommendations on digital terrestrial television broadcasting, integrated broadcast-broadband systems, audio evaluation of advanced sound systems and enhanced image dynamic range. SG 6 also completed new or updated existing Reports on digital terrestrial broadcasting, broadcasting for public warning, disaster mitigation and relief, Ultra High Definition Television and methods for Assessor Screening. A new Report on spectrum requirements for terrestrial television broadcasting in the frequency band 470-862 MHz in Region 1 and the Islamic Republic of Iran was produced in order to provide JTG 4-5-6-7 with the 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 launched two Intersector Rapporteur Groups on audiovisual media accessibility (IRG‑AVA) and on audiovisual quality assessments (IRG-AVQA).

## 5.6 Study Group 7

SG 7 approved four new and eight modified recommendations as well as seven new and three modified reports. A new Handbook on Radioastronomy was prepared by WP 7A and published by ITU.

A workshop on the “Future of Universal Time Scale” was held on 19-20 September 2013 providing a unique opportunity to get all available information on currently used or discussed frequency and time standards, sources and their characteristics, time scales and dissemination systems and different views on the future of UTC. The workshop was intended primarily for the managerial and technical staff of radiocommunication authorities involved in preparations for WRC-15 helping them to develop their national positions for agenda item 1.14. More information is available at: www.itu.int/ITU-R/go/itu-bipm-workshop-13/.

## 5.7 Joint Task Group 4-5-6-7

Since RAG-13 Joint Task Group (JTG) 4-5-6-7 held three meetings during which the group continued its efforts in relation to WRC-15 agenda items 1.1 and 1.2. The meetings solicited considerable interest resulting in a large number of participants. During its final meeting, 21‑31 July 2014, JTG 4-5-6-7 is expected to conclude its work on the preparation of draft CPM text on WRC-15 agenda items 1.1 and 1.2 and complete a number of Reports in support of the draft CPM text.

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

Intersectoral 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 participate in relevant Rapporteur Group meetings and contributes 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.

*Concerning ITU-T*:In addition to climate change and emergency communications, topics of mutual interest between ITU-R and ITU-T include the effects of human exposure to radio-frequencies, power line transmission systems, intelligent transport systems, common patent policy and intellectual property rights and audiovisual media accessibility.

There continues to be a requirement for close coordination on the various 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) and EMF exposure (WHO).

# 7 Other intersectoral activities

BR has actively participated in other intersectoral 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 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”, Action Line C5 “Building confidence and security in the use of ICTs”, Action Line C6 “Enabling environment” and Action Line C7 on “e‑environment”.

• *Climate Change and Emergency Communications*: Intersectoral 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. 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. The ITU-R webpage on climate change has been updated to reflect the latest developments in this field.

• *Broadband Commission*: BR participates in the ITU Broadband Commission Inter-Sectoral Group, which was set up in order to provide support to 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 for ITU meetings*: BR has been participating in the activities related to recent and forthcoming ITU events, conferences and meetings, including Telecom World 2013, WTPF-13, WTDC-14 and PP-14.

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