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| **Radiocommunication Study Groups** |  |
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|  | **Revision 1 to****Document 1A/39-E** |
| **29 June 2012** |
| **English only** |
| Chairman, Working Party 1A |
| Report oN the FIRST 2012-2015 MEETING OF WORKING PARTY 1A |
| (Geneva, 6-13 June 2012) |

# 1 Introduction

The meeting of Working Party 1A (WP 1A) on “Spectrum engineering techniques” was held at the ITU Headquarters in Geneva, Switzerland from 6 to 13 June 2012. A total of 120 delegates participated in the meeting from 36 Member States, 7 recognized operating agencies, 4 scientific or industrial organizations, 3 regional and other international organizations, one other entity dealing with telecommunications and the Radiocommunication Bureau (see Doc. [1A/38](http://www.itu.int/md/R12-WP1A-C-0038/en)). The meeting considered 59 contributions (see Doc. [1A/35](http://www.itu.int/md/R12-WP1A-C-0035/en)) and produced 20 output documents. The meeting was chaired by Mr. R. Garcia de Souza (Brazil, Federative Republic of), Chairman of WP 1A.

At the beginning of the meeting, a joint session of Working Parties 1A, 1B and 1C was held in order to organize the work on joint issues for the WPs.

# 2 Organization of the work

The structure of working groups and document attribution could be found in Revision 2 to Document 1A/ADM/4. The work was organized as follows:

– Mr. Reiner Liebler (D) chaired Working Group 1A1 (WG 1A1) on Power Line Telecommunication (PLT) Systems and related issues.

– Mr. Yves Ollivier (F) chaired Working Group 1A2 (WG 1A2) on ISM, protection of radiocommunication services and unwanted emissions.

– Mr. Sultan A. Al Balooshi (UAE) chaired Working Group 1A3 (WG 1A3) on CAT Handbook and other issues.

– Mr. Aldo Ongaro (CAN) chaired the joint WP 1A/WP 1B Drafting Group on cognitive radio systems (DG 1A/1B on CRS studies).

# 3 Results of the meeting

## 3.1 Power Line Telecommunication (PLT) Systems and related issues(source: Doc. 1A/TEMP/14 (edited))

### 3.1.1 Power Line Telecommunication (PLT) Systems

*Input Documents:* [*1A/379*](http://www.itu.int/md/R07-WP1A-C-0379/en)*[[1]](#footnote-1)\* (Annexes 2, 8, 9),* [*1A/394*](http://www.itu.int/md/R07-WP1A-C-0394/en)*\* (WP 6A),* [*1A/396*](http://www.itu.int/md/R07-WP1A-C-0396/en)*\* (SG 3),* [*1A/399*](http://www.itu.int/md/R07-WP1A-C-0399/en)*\* (WP 5B),* [*1A/2*](http://www.itu.int/md/R12-WP1A-C-0002/en)*[[2]](#footnote-2)\*\* (T-SG 15),* [*1A/3*](http://www.itu.int/md/R12-WP1A-C-0003/en)*(SG 3),* [*1A/10*](http://www.itu.int/md/R12-WP1A-C-0010/en)*(WP 6A),* [*1A/13*](http://www.itu.int/md/R12-WP1A-C-0013/en)*(WP 6A),* [*1A/27*](http://www.itu.int/md/R12-WP1A-C-0027/en)*\*\*(BBC).*

### 3.1.1.1 Preliminary draft revision of Recommendation ITU-R SM.1879-1

A preliminary draft revision of Recommendation ITU-R SM.1879-1 addressing the Impact of PLT devices on radiocommunication systems below 30 MHz and between 80 and 470 MHz has been developed and approved by WP 1A. This modification takes into account the information provided in the contributions received from WP 5B and WP 6A, extends the frequency range to cover also 30 to 80 MHz. The preliminary draft revision of Recommendation ITU-R SM.1879-1 can be found in Annex 1 to this Report (source: Doc. 1A/TEMP/15 (edited)) to seek further contributions for the next meeting.

### 3.1.1.2 Draft revision of Report ITU-R SM.2212

A draft revision of Report ITU-R SM.2212 on the impact of PLT systems on radiocommunication systems operating in the VHF and UHF bands above 80 MHz has been prepared. The purpose was to clarify the meaning of Recommendation ITU-R BS/BT.1895 “Protection criteria for terrestrial broadcasting systems” and to add a new section to the Report on meteorological aids service (new section 3.9bis). The draft revision of Report ITU-R SM.2212 was approved by WP 1A as Doc. 1A/TEMP/5 and forwarded to SG 1 for consideration (see Doc. [1/26](http://www.itu.int/md/R12-SG01-C-0026/en)(Rev.1)).

### 3.1.1.3 Working document towards a preliminary draft new Report ITU‑R SM.[PLT RAD‑PSD]

The working document towards a preliminary draft new Report ITU-R SM.[PLT RAD‑PSD] on methodologies to relate radiation from PLT installations to PLT modem output power (see Annex 2 to Doc. [1A/379](http://www.itu.int/md/R07-WP1A-C-0379/en)*\**) has been reviewed but no modifications were made. The working document can be found in Annex 2 to this Report to seek further contributions for the next meeting.

### 3.1.2 Smart grid power management systems

*Input Documents:* [*1A/379*](http://www.itu.int/md/R07-WP1A-C-0379/en)*\*(Annexes 3, 10),* [*1A/2*](http://www.itu.int/md/R12-WP1A-C-0002/en)*\*\*(T-SG 15),* [*1A/16*](http://www.itu.int/md/R12-WP1A-C-0016/en) *(WP 6A),* [*1A/20*](http://www.itu.int/md/R12-WP1A-C-0020/en)*(IEEE),* [*1A/22*](http://www.itu.int/md/R12-WP1A-C-0022/en)*(KOR),* [*1A/27*](http://www.itu.int/md/R12-WP1A-C-0027/en)*\*\*(BBC).*

The working document towards a preliminary draft new Report ITU-R SM.[SMART\_GRID] on smart grid power management systems has been updated based on the input contributions. The updated working document can be found in Annex 3 to this Report (source: Doc. 1A/TEMP/16 (edited)) to seek further contributions for the next meeting.

#### 3.1.3 Narrowband wireless home networking

*Input Documents:* [*1A/384*](http://www.itu.int/md/R07-WP1A-C-0384/en)*\*(WP 5A),* [*1A/386*](http://www.itu.int/md/R07-WP1A-C-0386/en)*\*(T-SG 15),* [*1A/395*](http://www.itu.int/md/R07-WP1A-C-0395/en)*\*(WP 5D),* [*1A/400*](http://www.itu.int/md/R07-WP1A-C-0400/en)*\*(WP 5A),* [*1A/401*](http://www.itu.int/md/R07-WP1A-C-0401/en)*\*,* [*1A/402*](http://www.itu.int/md/R07-WP1A-C-0402/en)*\*,* [*1A/14*](http://www.itu.int/md/R12-WP1A-C-0014/en)*,* [*1A/15*](http://www.itu.int/md/R12-WP1A-C-0015/en) *(T-SG15),* [*1A/27*](http://www.itu.int/md/R12-WP1A-C-0027/en)*\*\*(BBC),* [*1A/33*](http://www.itu.int/md/R12-WP1A-C-0033/en)*(WP 5A)*

The joint meeting of WPs 1A, 1B and 1C held on 6 June 2012 decided to attribute all contributions related to narrowband wireless home networking to WP 1B. Following the decision taken by the joint meeting, WP 1A noted all contributions on this issue.

#### 3.1.4 New project on ITU-T G.FAST

*Input Document: [1A/387](http://www.itu.int/md/R07-WP1A-C-0387/en)\*(T-SG 15)*

ITU-T SG 15 provided a liaison statement to WP 1A on its new project ITU-T G.Fast. This project foresees the use of radio frequencies on telephone wires at least up to 80 MHz – and possibly much higher – for the last part of the local loop. As there could be impacts on radiocommunication services, WP 1A should be kept informed on the progress of the G.Fast project, in particular on EMC related aspects. Recommendation ITU-R SM.1879, which was originally developed to cover PLT impacts only, can, in general, provide guidance on protection levels required by radio services from wired telecommunication and should be taken into account also for the ITU-T G.Fast project.

As there are also other developments with regard to the use of radio frequencies for wired telecommunication, e.g. such as the use of radio frequencies up 1 GHz and higher in cable TV systems, it was proposed to broaden the scope of the Rapporteur Group on PLT (see Annex 1 to Doc. [1A/252](http://www.itu.int/md/R07-WP1A-C-0252/en)\*). Besides continuing the work on PLT, the newly established Rapporteur Group should also work on other coexistence issues between wired telecommunication and radiocommunication systems. Participation of and contributions from relevant ITU-T Study Groups (e.g. 5, 9, 15) should be invited in order to foster the mutual cooperation between ITU-T and ITU-R on their respective responsibility.

The Terms of Reference for the Rapporteur Group on coexistence of wired telecommunication with radiocommunication systems was approved by WP 1A and can be found in Annex 4 to this Report (source: Doc. 1A/TEMP/17 (edited)).

## 3.1.5 Liaison statements

Working Party 1A developed a liaison statement to various ITU-R Working Parties and ITU-T Study Groups on developments on coexistence of wired telecommunication (including PLT) and radiocommunication systems inviting contributions to the further work. It can be found in Annex 5 to this Report (source: Doc. 1A/TEMP/18 (edited)).

Working Party 1A developed a liaison statement to WP 3L with a copy to WP 1C (see Doc. [3L/24](http://www.itu.int/md/R12-WP3L-C-0024/en) and [1C/37](http://www.itu.int/md/R12-WP1C-C-0037/en) (source: Doc. 1A/TEMP/19)) making them aware of WP 1A’s remarks on Question ITU‑R 230-2/3 on prediction methods and models applicable to power line telecommunication systems.

## 3.2 ISM, protection of radiocommunication services and unwanted emissions

### 3.2.1 Unwanted emissions

*Input Documents:* [*1A/379*](http://www.itu.int/md/R07-WP1A-C-0379/en)*\*(Annexes 4 and 6),* [*1A/12*](http://www.itu.int/md/R12-WP1A-C-0012/en) *(SG 1 Chairman),* [*1A/18*](http://www.itu.int/md/R12-WP1A-C-0018/en)*(D & G),* [*1A/24*](http://www.itu.int/md/R12-WP1A-C-0024/en) *(J)*

Document [1A/18](http://www.itu.int/md/R12-WP1A-C-0018/en) proposed to update the characteristics of unwanted emissions in the spurious domain for the digital age. Current definitions and descriptions for unwanted emissions in the spurious domain are mainly based on analogue technologies, which are sensitive to spikes especially in the frequency domain. Document [1A/18](http://www.itu.int/md/R12-WP1A-C-0018/en) maintained that new digital, broadband technologies could better tolerate this type of interference (i.e., narrow frequency domain spikes). It provided examples showing that unwanted emissions of mass-marketed broadband mobile devices may be up to 40-50 dB less than the limits specified in Recommendation ITU-R SM.329. The document, therefore, argued that updating unwanted emission characteristics for digital systems may lead to improved spectrum efficiency.

Concerns were raised during the consideration of Document [1A/18](http://www.itu.int/md/R12-WP1A-C-0018/en) that there are serious implications in this contribution such as regulatory, manufacturing, standards and equipment amortization issues. Further concerns were raised that the contribution may be linked to WRC-15 Agenda items 1.1 and 1.2 as it emphasized potential benefits to mobile broadband devices resulting from updated unwanted emission characteristics.

It was recognized that updating characteristics of unwanted emission is a long-term effort and requires careful studies on potential the possible technical and regulatory impacts. Therefore, administrations interested in this topic are invited to contribute to future WP 1A meetings. It was also noted that Document [1A/18](http://www.itu.int/md/R12-WP1A-C-0018/en) was intended to open only a dialogue on updating of the unwanted emissions characteristics, and it was not related to Agenda items 1.1 and 1.2 of WRC-15.

The working document towards a preliminary draft new Report on continuing studies towards improved out-of-band roll-off for radars to enhance spectrum efficiency has been improved based on the input contributions. It can be found in Annex 7 to this Report (source: Doc. 1A/TEMP/3 (edited)). Further contributions on this issue are invited.

Working Party 1A also agreed to maintain the Correspondence Group on unwanted emissions of radars in the out-of-band domain (see Annex 6 to Doc. [1A/379](http://www.itu.int/md/R07-WP1A-C-0379/en)*\**). The Administration of Japan offered to make the editorial modifications to the mentioned draft new Report to serve as initial input to Correspondence Group on this issue.

Working Party 1A revisited the draft modification of Recommendation ITU-R SM.329-11 – Unwanted emissions in the spurious domain and agreed to forward it to SG 1 for its consideration (see Doc. [1/39](http://www.itu.int/md/R12-SG01-C-0039/en) (source: Doc. 1A/TEMP/4 (edited))).

### 3.2.2 Protection distance calculation between inductive systems and radiocommunication services using frequencies below 30 MHz

*Input Documents:* [*1A/379*](http://www.itu.int/md/R07-WP1A-C-0379/en)*\* (Annex 1)* [*1A/21*](http://www.itu.int/md/R12-WP1A-C-0021/en) *(KOR),* [*1A/393*](http://www.itu.int/md/R07-WP1A-C-0393/en)*\*(WP 6A)*

Working Party 1A improved the draft new Recommendation ITU-R SM.[INDUCTIVE\_SYS] on protection distance calculation between inductive systems and radiocommunication services using frequencies below 30 MHz and decided to forward the proposal to SG 1 for its consideration (see Doc. [1/30](http://www.itu.int/md/R12-SG01-C-0030/en) (source: Doc. 1A/TEMP/7 (edited))).

### 3.2.3 General principles and methods for sharing between radiocommunication services or between radio stations

*Input Document:* [*1A/23*](http://www.itu.int/md/R12-WP1A-C-0023/en) *(FIN)*

Based on the input contribution WP 1A developed a working document towards a preliminary draft revision of Recommendation ITU-R SM.1132-2 on general principles and methods for sharing between radiocommunication services or between radio stations. It can be found in Annex 6 to this Report (source: Doc. 1A/TEMP/6 (edited)). Further contributions on this issue are invited.

### 3.2.4 Protection of radiocommunication services

*Input Documents:* [*1A/379*](http://www.itu.int/md/R07-WP1A-C-0379/en)*\* (Annexes 5, 11, 12),* [*1A/383*](http://www.itu.int/md/R07-WP1A-C-0383/en)*\*(SG 5 WPs),* [*1A/385*](http://www.itu.int/md/R07-WP1A-C-0385/en)*\*(WP 4C),* [*1A/389*](http://www.itu.int/md/R07-WP1A-C-0389/en)*\*(WP 4A),* [*1A/390*](http://www.itu.int/md/R07-WP1A-C-0390/en)*\*(WPs 7B, 7C, 7D),* [*1A/391*](http://www.itu.int/md/R07-WP1A-C-0391/en)*\*,* [*1A/392*](http://www.itu.int/md/R07-WP1A-C-0392/en)*\*(WP 6A)*

#### 3.2.4.1 Database for the protection of radiocommunication services

Working Party 1A coordinated input from all ITU-R Working Parties concerning a proposed database to be maintained for liaison purposes with CISPR. The present database appears at <http://www.iec.ch/emc/pdf/radioserv-char_rev.pdf>. The relevant contributions are: [1A/383](http://www.itu.int/md/R07-WP1A-C-0383/en)\*(SG 5 WPs), [1A/385](http://www.itu.int/md/R07-WP1A-C-0385/en)\*(WP 4C), [1A/389](http://www.itu.int/md/R07-WP1A-C-0389/en)\*(WP 4A), [1A/390](http://www.itu.int/md/R07-WP1A-C-0390/en)\*(WPs 7B, 7C, 7D), [1A/392](http://www.itu.int/md/R07-WP1A-C-0392/en)\*(WP 6A).

The responding Working Parties 4A, 4C, 5A, 5B, 5C, 5D, 6A, 7B, 7C and 7D recognized that providing relevant information to CISPR might help to ensure the protection of the radio services. However, ITU-R Recommendations and Reports are constantly being added, reviewed and revised. If a new and separate database were to exist, there could be considerable lag between updated ITU‑R documentation and the database. This lag could also lead to the inadvertent exclusion of new or updated information. Moreover, database has a number of inherent risks and difficulties:

− in the database development and update process, errors may be introduced to the information and data from the ITU-R Recommendations/Reports;

− without the explanatory text of the Recommendations/Reports, the data might be subject to misinterpretation;

− such a database would need to be updated with any changes to Radio Regulations and at each revision of any related ITU-R Recommendations/Reports.

Working Parties 4A and 4C indicated concern on possible duplication of information between ITU‑R Recommendations and a CISPR database; errors or oversight; various forms of protection criteria to be taken into account; and that protection criteria for certain radio systems cannot always be summarized simply by one value of one criterion. Working Parties 7B, 7C, and 7D emphasized the highly specialized and sensitive systems under their purview.

Working Party 1A proposes that CISPR should rely on ITU-R Recommendations covering topics such as protection criteria for the radio services. In this respect, a liaison statement was developed with annexes detailing Recommendations pertinent to the protection of the space, terrestrial, broadcasting and scientific services. It can be found in Annex 8 to this Report
(source: Doc. 1A/TEMP/20). It was expressed the opinion that CISPR should be advised that EMC limits for disturbance emissions from electronic and electrical apparatus should be set so that radiocommunication services operating in accordance with the Radio Regulations can operate without any interference under normal operating conditions. It was also mentioned that CISPR should be further advised that administrations are using frequency bands in conformity with the provisions of Radio Regulations and, as such, radiocommunication services cannot tolerate any degradation in sensitivity of more than 0.05 dB from electric products, un-intentional radiators: i.e., 20 dB below the receiver thermal noise. Finally, WP 1A expressed its wish to continue collaboration with CISPR on this matter.

#### 3.2.4.2 Proposed definitions of ACLR and ACS

Working Party 1A considered a liaison statement from WP 6A on the definitions and relationship between adjacent channel leakage power ratio (ACLR), adjacent channel selectivity (ACS) and Protection Ratio (PR), see Doc. [1A/391](http://www.itu.int/md/R07-WP1A-C-0391/en)\*. WP 1A agreed to send a reply liaison statement to WP 6A indicating that WP 1A supports fully the provided mathematical definition and its illustration, see Doc. [6A/87](http://www.itu.int/md/R12-WP6A-C-0087/en) (source: Doc. 1A/TEMP/1 (edited)).

### 3.2.5 Active services in the range 275-1 000 GHz

*Input Documents:* [*1A/25*](http://www.itu.int/md/R12-WP1A-C-0025/en) *(J)*

Working Party 1A considered the input contribution on technical and operational characteristics of the active services operating in the range 275-1 000 GHz (see Doc. [1A/25](http://www.itu.int/md/R12-WP1A-C-0025/en%60)) which proposed a new study Question on “Technical and operational characteristics of the active services operating in the range 275-1 000 GHz”. The meeting agreed to draft a liaison statement (see Doc. [1/27](http://www.itu.int/md/R12-SG01-C-0027/en)
(source: Doc. 1A/TEMP/2 (edited))) to be sent by SG 1 seeking information to answer the following questions:

– Propagation data required for the planning of active services operating above 275 GHz.

– Technical and operational parameters and the characteristics of active services above 275 GHz.

– Sharing studies required for active services operating above 275 GHz.

It was also agreed that Doc. [1A/25](http://www.itu.int/md/R12-WP1A-C-0025/en%60) will be considered again at the next WP 1A meeting.

## 3.3 CAT Handbook and other issues (source: Doc. 1A/TEMP/8 (edited))

### 3.3.1 CAT Handbook

*Input Documents:* [*1A/379*](http://www.itu.int/md/R07-WP1A-C-0379/en)*\* (Annex 7)* [*1A/19*](http://www.itu.int/md/R12-WP1A-C-0019/en) *(Elbit Systems BMD and Land EW - Elisra Ltd.),* [*1A/28*](http://www.itu.int/md/R12-WP1A-C-0028/en)*(RG Rapporteur),* [*1A/29*](http://www.itu.int/md/R12-WP1A-C-0029/en)*(UAE)*

Four input contributions were received regarding the revision of the ITU Handbook on “Computer aided techniques for spectrum management (2005)”.

Annex 7 to Document [1A/379](http://www.itu.int/md/R07-WP1A-C-0379/en)*\** was noted and no change was proposed to the Terms of Reference for the Rapporteur Group on the revision of the ITU Handbook on “Computer-aided techniques for spectrum management”.

Document [1A/19](http://www.itu.int/md/R12-WP1A-C-0019/en) proposed modifications to Annex 3 of the Handbook. There was another document received by the RG Rapporteur from TCI International Ltd., which proposed modifications to Annex 7 of the Handbook. The group reviewed the changes and additional modifications were made to the Annexes.

Document [1A/28](http://www.itu.int/md/R12-WP1A-C-0028/en) was a report about the activities of the RG since the last meeting in June 2011. WP 1A decided to continue the work on the revision of the CAT Handbook and encouraged participants to participate actively in the works of the RG.

Document [1A/29](http://www.itu.int/md/R12-WP1A-C-0029/en) proposed editorial changes to Chapter 1 of the Handbook which were reviewed by the group.

It was agreed by the meeting that the annexes to the Handbook should not exceed a maximum of 6 to 8 pages per Annex in order to reduce the efforts and costs of translation, as well as to give an equal space for contributors to these annexes.

The working document towards a draft revision of Chapter 1, Annex 3 and Annex 7 of the ITU Handbook on Computer-aided techniques for spectrum management (CAT) can be found in Annex 9 to this Report (source: Document 1A/TEMP/9 (edited)).

### 3.3.2 Power transmission via radio frequency beam

*Input Documents:* [*1A/379*](http://www.itu.int/md/R07-WP1A-C-0379/en)*\* (Annex 14),* [*1A/26*](http://www.itu.int/md/R12-WP1A-C-0026/en) *(CHN)*

Working Party 1A received two input documents with regard to issue of power transmission via radio frequency beam.

Annex 14 to Document [1A/379](http://www.itu.int/md/R07-WP1A-C-0379/en)*\** is about a working document towards a preliminary draft new Report regarding Question ITU-R 210-2/1 “Power transmission via radio frequency beam”. This document was noted by WP 1A with no modifications. This working document is attached to this Report to seek further contributions for the next meeting (see Annex 10 to this Report).

Document [1A/26](http://www.itu.int/md/R12-WP1A-C-0026/en) proposed a preliminary draft revision of Question ITU-R 210-2/1. WP 1A reviewed the proposals the following course of actions have been decided:

– The title of the Question ITU-R 210-2/1 “Power transmission via radio beam” should be changed to “Wireless power transmission”.

– The completion date of Question ITU-R 210-2/1 “Wireless power transmission” should be extended to 2014 and this modification should be reflected in the information contained in Doc. 1A/4 – Assignment of the Study Group 1 texts to the Working Parties.

– Draft editorial modifications have been approved by the group.

The preliminary draft revision of Question ITU-R 210-2/1 was approved by WP 1A and forwarded to SG 1 as draft revision of Question ITU-R 210-2/1 – Wireless power transmission (see Doc. [1/40](http://www.itu.int/md/R12-SG01-C-0040/en) (source: Doc. 1A/TEMP/10 (edited))) for consideration.

### 3.3.3 Assignment and review of the SG 1 texts and of WRC issues

*Input Documents:* [*1A/4*](http://www.itu.int/md/R12-WP1A-C-0004/en)*,* [*1A/5*](http://www.itu.int/md/R12-WP1A-C-0005/en)*,* [*1A/17*](http://www.itu.int/md/R12-WP1A-C-0017/en) *(SG 1 Chairman)*

Working Party 1A reviewed the input documents from the SG 1 Chairman with regard to assignment and review of the SG 1 texts and of WRC issues. Doc. [1A/4](http://www.itu.int/md/R12-WP1A-C-0004/en) contains the assignment of the Study Group 1 texts to the Working Parties. Doc. [1A/5](http://www.itu.int/md/R12-WP1A-C-0005/en) contains the WRC Resolutions and Recommendations related to the work of Study Group 1. Doc. [1A/17](http://www.itu.int/md/R12-WP1A-C-0017/en) contains the summary of the results of RA-12 and CPM15-1. The documents were reviewed by WP 1A and it was agreed that there is no need for modifications to these documents at this point, excepting for the Question referred to in Section 3.3.2 above.

### 3.4 Cognitive radio systems (source: Doc. 1A/TEMP/11 (edited))

*Input Documents:* [*1A/23*](http://www.itu.int/md/R12-WP1A-C-0023/en) *(FIN),* [*1A/30*](http://www.itu.int/md/R12-WP1A-C-0030/en)*-*[*1B/30*](http://www.itu.int/md/R12-WP1B-C-0030/en) *(CAN),* [*1A/32*](http://www.itu.int/md/R12-WP1A-C-0032/en)*-*[*1B/32*](http://www.itu.int/md/R12-WP1B-C-0032/en)*(WP 5A),* [*1A/37*](http://www.itu.int/md/R12-WP1A-C-0032/en)*-*[*1B/40*](http://www.itu.int/md/R12-WP1B-C-0040/en) *(WP 1C Vice-Chairman),* [*1B/308(Rev.1*](http://www.itu.int/md/R07-WP1B-C-0308/en)*)\* (IEEE),* [*1B/22*](http://www.itu.int/md/R12-WP1B-C-0022/en)*(FIN)*

The Chairman of WP 1A and the Chairman of Working Group 1B-3, within WP 1B, each established a drafting group to consider the scope of studies, type of deliverables and timing of deliverables which could be expected in each of the respective Working Parties on cognitive radio systems (CRS) studies in accordance with Resolution ITU-R 58. These tasks were in accordance with those identified in the joint WPs 1A, 1B and 1C meeting held on 6 June 2012. Noting these proposed drafting groups shared the same goals and the same Chairman, it was decided for the sake of efficiencies to hold these drafting group meetings jointly under the name “DG 1A/1B on CRS studies”.

Drafting Group 1A/1B on CRS studies held a total of three meetings and completed its work in the evening session on Friday 8 June 2012 following the WG 1B-3 meeting. This drafting group considered four input documents to WP 1A and five input documents to WP 1B and produced two output documents as follows:

– a document on studies on CRS in relation to Resolution ITU-R 58 within Working Parties 1A and 1B;

– a draft liaison statement on further studies on CRS.

The document on CRS studies describes the scope of studies, type of deliverables and timing of deliverables for each of the Working Parties 1A and 1B. It should be noted that the type of deliverables identified were based on initial views where there may be some work undertaken with respect to CRS, but the lists provided should be considered as non-definitive as well as non‑exhaustive (i.e. not all in the list may result in deliverables and there could be others added as studies progress). The document on studies on CRS in relation to Resolution ITU-R 58 within Working Parties 1A and 1B was approved by both WPs at the joint session held on 13 June 2012 (see Annex 11 to this Report (source: Document 1A/TEMP/12 and Document 1B/TEMP/13 (edited and merged)).

The draft liaison statement on further studies on CRS has been prepared to be sent to other SGs and WPs. There was significant discussion in the drafting group that it would be more practical to have this liaison approved and sent by all three working parties of SG 1 to the other relevant working parties. There was also a suggestion that the return liaison statements could be directed to one Working Party (possibly WP 1B) which could be identified as a lead within SG 1 in order to coordinate/manage the liaisons. The meeting agreed that WP 1B would lead the liaison of SG 1 with the other Study Groups and Working Parties from ITU-R for further work on CRS. The liaison statement on further studies on CRS was approved during the joint plenary session of WP 1A and WP 1B and has been published as Document [4A/66](http://www.itu.int/md/R12-WP4A-C-0066/en)–[4B/34](http://www.itu.int/md/R12-WP4B-C-0034/en)–[4C/57](http://www.itu.int/md/R12-WP4C-C-0057/en)–[5A/89](http://www.itu.int/md/R12-WP5A-C-0089/en)–[5B/72](http://www.itu.int/md/R12-WP5B-C-0072/en)–[5C/64](http://www.itu.int/md/R12-WP5C-C-0064/en)–[5D/45](http://www.itu.int/md/R12-WP5D-C-0045/en)–[6A/92](http://www.itu.int/md/R12-WP6A-C-0092/en)–[6B/47](http://www.itu.int/md/R12-WP6B-C-0047/en)–[6C/68](http://www.itu.int/md/R12-WP6C-C-0068/en)–[7B/24](http://www.itu.int/md/R12-WP7B-C-0024/en)–[7C/25](http://www.itu.int/md/R12-WP7C-C-0025/en)–[7D/20](http://www.itu.int/md/R12-WP7D-C-0020/en) (source: Doc. 1A/TEMP/13(Rev.1) (edited)).

Regarding the consideration of other input documents, it should be noted that the drafting group had considered Doc. [1A/23](http://www.itu.int/md/R12-WP1A-C-0023/en) (FIN) which was not attributed to this group but did have some relevance. Doc. [1B/308(Rev.1](http://www.itu.int/md/R07-WP1B-C-0308/en))\*(IEEE) was considered and noted. In its consideration of the work plan in Doc. [1B/22](http://www.itu.int/md/R12-WP1B-C-0022/en) (FIN), the drafting group acknowledged that some elements of the contribution have been either superseded by discussions at these meetings or captured in the output document and that the work plan concept could be brought to a future WP 1A or WP 1B meeting in the context of specific deliverables for which work will be undertaken. In relation to the proposal in the contribution of having more than WP 1B meeting per year, there were concerns expressed on how to deal with the work on CRS in a reasonable time. Noting that the timeframe identified is a maximum of two study cycles, it was decided that it would be premature to take any decision in this regard at this meeting, but that this could be reviewed at the next meeting taking into account the progress of work. The remaining input contributions were appropriately considered and reflected in the above-mentioned document on studies on CRS in relation to Resolution ITU-R 58 within Working Parties 1A and 1B.

Further to the drafting group work, it is noted in Docs. [1A/37](http://www.itu.int/md/R12-WP1A-C-0037/en) and [1B/40](http://www.itu.int/md/R12-WP1B-C-0040/en) that WP 1C is not concerned with undertaking any activities on CRS for the time being, but wishes to be kept informed about future developments regarding CRS for consideration of possible future work. This conclusion was also included in the above-mentioned document on studies on CRS in relation to Resolution ITU-R 58 within Working Parties 1A and 1B.

### 3.5 Other documents and other issues

*Input Documents:* [*1A/379*](http://www.itu.int/md/R07-WP1A-C-0379/en)*\* Annex 13 (WP 1A),* [*1A/381*](http://www.itu.int/md/R07-WP1A-C-0381/en)*\*(ISO/IEC JTC 1/SC 31),* [*1A/382*](http://www.itu.int/md/R07-WP1A-C-0382/en)*\*(WP 5C),* [*1A/388*](http://www.itu.int/md/R07-WP1A-C-0388/en)*\*(ITU-T JCA-IoT Convener ),* [*1A/397*](http://www.itu.int/md/R07-WP1A-C-0397/en)*\*(SG 3),* [*1A/398*](http://www.itu.int/md/R07-WP1A-C-0398/en)*\*(WP 5C),* [*1A/6*](http://www.itu.int/md/R12-WP1A-C-0006/en)*,* [*1A/7*](http://www.itu.int/md/R12-WP1A-C-0007/en)*,* [*1A/8*](http://www.itu.int/md/R12-WP1A-C-0008/en)*,* [*1A/9*](http://www.itu.int/md/R12-WP1A-C-0009/en) *(BR/SGD),* [*1A/31*](http://www.itu.int/md/R12-WP1A-C-0031/en) *(WP 5B),* [*1A/34*](http://www.itu.int/md/R12-WP1A-C-0034/en) *(WP 5A),* [*1A/36*](http://www.itu.int/md/R12-WP1A-C-0036/en)*(WP 1C).*

Working Party 1A highlighted the reply liaison statement to JCA-IOT on activities of NID/USN/RFID Standardization (see Annex 13 to Doc. [1A/379](http://www.itu.int/md/R07-WP1A-C-0379/en)*\**) and it was agreed that no action was needed. The document was noted.

Working Party 1A considered Document [1A/381](http://www.itu.int/md/R07-WP1A-C-0381/en)*\**, a correspondence from International Organisation for Standardisation (ISO/IEC JTC 1/SC 31) on automatic identification and data capture techniques. It was agreed that no action was needed. The document was noted.

Working Party 1A considered a liaison statement from WP 5C on revisions of F-Series Recommendations on the interference criteria (Recommendations ITU-R F.758-4 and ITU‑R F.1495-1), see Doc. [1A/382](http://www.itu.int/md/R07-WP1A-C-0382/en)*\**. It was agreed that no action was needed. The document was noted.

Working Party 1A considered a liaison statement from ITU-T JCA-IoT informing WP 1A about the activities of the group and asking for collaboration to provide relevant information to support the development of the IoT standards roadmap, see Doc. [1A/388](http://www.itu.int/md/R07-WP1A-C-0388/en)*\**. It was agreed that no action was needed. The document was noted.

Working Party 1A considered a liaison statement from SG 3 on the ITU Handbook on “Propagation information for the prediction of interference and coordination distance” where Working Party 3M asked for comments or suggestions before its next meeting in June 2012 in order to finalize the Handbook, see Doc. [1A/397](http://www.itu.int/md/R07-WP1A-C-0397/en)*\**. It was agreed that no action was needed. The document was noted.

Working Party 1A considered a liaison statement from WP 5C on draft revision of Recommendation ITU-R F.758-4, see Doc. [1A/398](http://www.itu.int/md/R07-WP1A-C-0398/en)*\**. Since WP 5C has already completed the work on the revision, it was agreed that no action was needed. The document was noted.

Working Party 1A considered various documents concerning Recommendations and Questions brought to attention of WP 1A, see Docs. [1A/6](http://www.itu.int/md/R12-WP1A-C-0006/en), [1A/7](http://www.itu.int/md/R12-WP1A-C-0007/en), [1A/8](http://www.itu.int/md/R12-WP1A-C-0008/en) and [1A/9](http://www.itu.int/md/R12-WP1A-C-0009/en). It was agreed that no action was needed. These documents were noted.

Working Party 1A considered a liaison statement from WP 5B on WRC-15 Agenda item 1.1 for information, see Doc. [1A/31](http://www.itu.int/md/R12-WP1A-C-0031/en). It was agreed that no action was needed. The document was noted.

Working Party 1A considered a liaison statement from WP 5A on WRC-15 Agenda item 1.10 for information, see Doc. [1A/34](http://www.itu.int/md/R12-WP1A-C-0034/en). It was agreed that no action was needed. The document was noted.

Working Party 1A considered a note from the WP 1C Vive-Chairman informing that it had received a proposal from China (People’s Republic of) on a draft new Question on timely and dynamic spectrum database, see Doc. [1A/36](http://www.itu.int/md/R12-WP1A-C-0036/en). It was agreed that no action was needed. The document was noted.

# 4 Documents forwarded to Study Group 1 for consideration

## 4.1 Proposals for draft new or revision of ITU-R Recommendations

Two draft new or revision of ITU-R Recommendations have been developed and forwarded to Study Group 1 for further consideration:

– draft new Recommendation ITU-R SM.[INDUCTIVE\_SYS] – Protection distance calculation between inductive systems and radiocommunication services using frequencies below 30 MHz (see Doc. [1/30](http://www.itu.int/md/R12-SG01-C-0030/en), source: Doc. 1A/TEMP/7 (edited));

– draft modification of Recommendation ITU-R SM.329-11 – Unwanted emissions in the spurious domain (see Doc. [1/39](http://www.itu.int/md/R12-SG01-C-0039/en), source: Doc. 1A/TEMP/4 (edited)).

## 4.2 Proposals for draft new or revision of ITU-R Reports

One draft revision of ITU-R Report has been developed and forwarded to Study Group 1 for further consideration:

– draft modification of Report ITU-R SM.2212 on the impact of PLT systems on radiocommunication systems operating in the VHF and UHF bands above 80 MHz
(see Doc. [1/26](http://www.itu.int/md/R12-SG01-C-0026/en), source: Doc. 1A/TEMP/5 (edited)).

## 4.3 Proposal for draft new or revision of ITU-R Questions

One draft revision of ITU-R Question has been developed and forwarded to Study Group 1 for further consideration:

* draft revision of Question ITU-R 210-2/1 – Wireless power transmission
(see Doc. [1/40](http://www.itu.int/md/R12-SG01-C-0040/en), source: Doc. 1A/TEMP/10 (edited)).

## 4.4 Status of ITU-R Recommendations, Reports and Questions

Working Party 1A reviewed the input documents from SG 1 Chairman with regard to assignment and review of the SG 1 texts and of WRC issues (see Docs. [1/2](http://www.itu.int/md/R12-SG01-C-0002/en), [1/3](http://www.itu.int/md/R12-SG01-C-0003/en) and [1/16](http://www.itu.int/md/R12-SG01-C-0016/en)). These documents were considered by WG 1A3 and the conclusions are provided in Section 3.3.3 above.

## 4.5 Liaison statements

One draft liaison statement has been developed and forwarded to Study Group 1 for further consideration:

– draft liaison statement from Study Group 1 to Study Groups 3, 4, 5 and 7 on active services operating above 275 GHz (see Doc. [1/27](http://www.itu.int/md/R12-SG01-C-0027/en), source: Doc. 1A/TEMP/2 (edited)).

# 5 Objectives for the next meeting of WP 1A

The following items will be the main objectives for study at the next meeting of WP 1A:

– finalize the work on the preliminary draft revision of Recommendation ITU‑R SM.1879-1 on the impact of power line high data rate telecommunication systems on radiocommunication systems below 470 MHz;

– improve the working document towards a preliminary draft new Report ITU‑R SM.[PLT RAD PSD] on methodologies to relate radiation from PLT installations to PLT modem output power;

– improve the working document towards a PDN Report ITU-R SM.[SMART\_GRID] – Smart grid power management systems;

– review the work done by the Rapporteur Group on coexistence of wired telecommunication with radiocommunication systems;

– improve the working document towards a preliminary draft new Report on continuing studies towards improved out-of-band roll-off for radars to enhance spectrum efficiency;

– improve the working document towards a preliminary draft revision of Recommendation ITU-R SM.1132-2 – General principles and methods for sharing between radiocommunication services or between radio stations;

– review the work done by the Correspondence Group on unwanted emissions of radars in the out-of-band domain;

– further consider the technical and operational characteristics of the active services operating in the range 275-1 000 GHz;

– improve the working document towards a draft revision of Chapter 1, Annex 3 and Annex 7 of the ITU Handbook on computer-aided techniques for spectrum management (CAT);

– review the work done by the Rapporteur Group on the revision of the ITU Handbook on “Computer-aided techniques for spectrum management”.

# 6 Next meeting

The next meeting of WP 1A is scheduled for 4-11 June 2013 followed by the meeting of SG 1 on 12 June 2012, subject to a further confirmation in the announcement letters for these meetings. Both meetings should take place in Geneva.

# 7 Closure of the meeting

The Chairman of Working Party 1A thanked the delegates for their participation and contributions, especially the Chairmen of the Working Groups and Drafting Groups, as well as the Counsellor and the staff of the BR for their support.

List of Annexes

| Annex No. | Issue | Source document |
| --- | --- | --- |
| 1 | Preliminary draft revision of Recommendation ITU-R SM.1879-1 – The impact of power line high data rate telecommunication systems on radiocommunication systems below 30 MHz and between 80 and 470 MHz | 1A/TEMP/15 |
| 2 | Working document towards a preliminary draft new Report ITU-R SM.[PLT RAD PSD] on Methodologies to relate radiation from PLT installations to PLT modem output power | Annex 2 to Doc. 1A/379 |
| 3 | Working document towards a preliminary draft new Report ITU-R SM.[SMART\_GRID] on Smart grid power management systems | 1A/TEMP/16 |
| 4 | Terms of Reference for the Rapporteur Group on coexistence of wired telecommunication with radiocommunication systems | 1A/TEMP/17 |
| 5 | Liaison statement to ITU-R Working Parties 4C, 5A, 5B, 5C, 5D, 6A, 7C and 7D (copy to ITU-R Working Party 3L and to ITU-T Study Groups 5, 9 and 15 for information and/or action if any) – Developments on coexistence of wired telecommunication (including PLT) and radiocommunication systems | 1A/TEMP/18 |
| 6 | Working document towards a preliminary draft revision of Recommendation ITU-R SM.1132-2 on General principles and methods for sharing between radiocommunication services or between radio stations | 1A/TEMP/6 |
| 7 | Working document towards a preliminary draft new Report on Continuing studies towards improved out-of-band roll-off for radars to enhance spectrum efficiency has been improved | 1A/TEMP/3 |
| 8 | Liaison statement to CISPR and ITU-R Working Parties 4A, 4C, 5A, 5B, 5C, 5D, 6A, 7B, 7C and 7D on A database for the protection of radio services | 1A/TEMP/20 |
| 9 | Working document towards a draft revision of Chapter 1, Annex 3 and Annex 7 of the ITU Handbook on Computer-aided techniques for spectrum management (CAT) | 1A/TEMP/9 (Rev.1) |
| 10 | Working document towards a preliminary draft new Report regarding Question ITU-R 210-2/1 “Power transmission via radio frequency beam” | Annex 14 to Doc. 1A/379 |
| 11 | Studies on cognitive radio systems (CRS) in relation to Resolution ITU-R 58 within Working Parties 1A and 1B | 1A/TEMP/12 |

1. \* Documents carried over from 2007-2012 Study Period. [↑](#footnote-ref-1)
2. \*\* Relevant part. [↑](#footnote-ref-2)