

**ITU-R SG 1/WP 1B WORKSHOP:
SPECTRUM MANAGEMENT ISSUES ON
THE USE OF WHITE SPACES BY
COGNITIVE RADIO SYSTEMS
(Geneva, 20 January 2014)**

**Spectrum management
studies,
incl. RA-12 & WRC-12
related outcomes**

***Mr. Naser Al-Rashedi
(SG 1 Vice-Chairman &
WP 1B Chairman)***

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SPECTRUM MANAGEMENT ISSUES ON
THE USE OF WHITE SPACES BY
COGNITIVE RADIO SYSTEMS**

**GENEVA, SWITZERLAND
20 JANUARY 2014**

www.itu.int/go/ITU-R/RWP1B-SMWSCRS-14





ITU-R SG 1 Studies (prior to WRC-12)



By ITU-R Working Party 1B:

- Report ITU-R SM.2152 (2009): Definition of SdR and CRS
Cognitive radio system (CRS): A radio system employing technology that allows the system to obtain knowledge of its operational and geographical environment, established policies and its internal state; to dynamically and autonomously adjust its operational parameters and protocols according to its obtained knowledge in order to achieve predefined objectives; and to learn from the results obtained.
- Studies on WRC-12 Agenda item 1.19
 - Recognition of potential benefits and applicability of CRS technologies to various radiocommunication services
 - **Implementation of CRS will have to be in accordance with the Radio Regulations but also with national regulations**
 - Still open issues and specific concerns related to several radiocommunication services that need further studies, especially in the bands shared between several services.



Framework of new ITU-R Studies



WRC-12 OUTCOMES:

- No need to change the ITU Radio Regulations (RR).
i.e. contains enough flexibility to use CRS technology in some services, in accordance with RR & national regulations
- Deployment and use of CRS – see Rec. 76 (WRC-12)
recommends that administrations participate actively in the ITU-R studies conducted under Res. ITU-R 58 (RA-12),
recognizing that a) operation in accordance with the RR and b) protection of stations of other administrations operating in accordance with the RR

RA-12 OUTCOMES:

- Studies on implementation and use of CRS (Res. ITU-R 58):
operational & technical requirements, characteristics, performance and possible benefits, with attention given to enhancing coexistence & sharing among radio. services



ITU-R Working Party **1B**: Spectrum Management issues

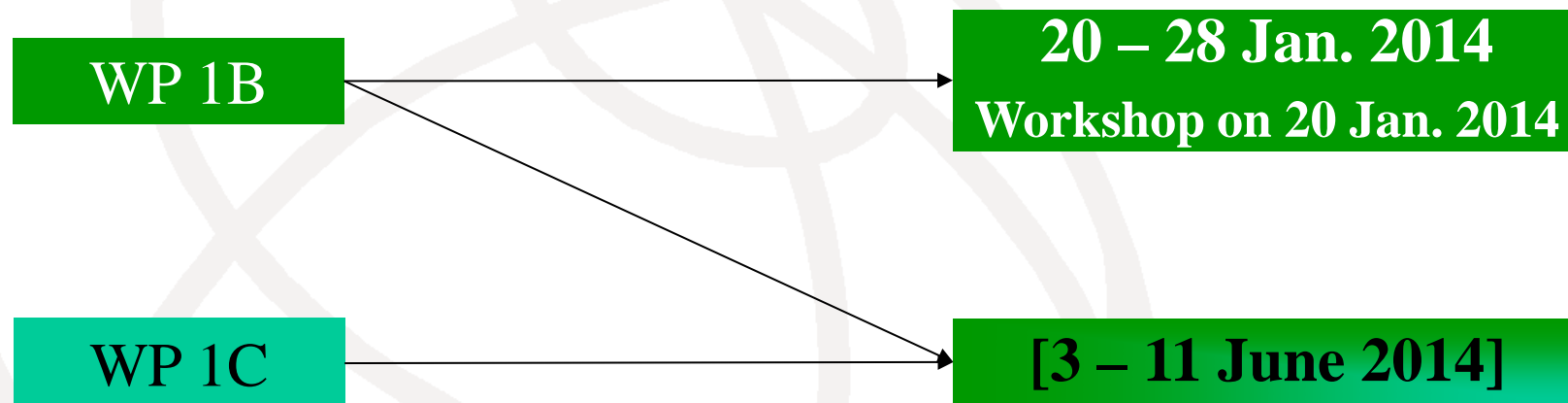
- Working document towards a PDN Report ITU R SM.[WHITE-SPACE] on SM principles and spectrum engineering techniques for the use of WS by radio sys. employing cognitive capabilities
- Consultations with other ITU-R working parties responsible for radiocommunication services

ITU-R Working Party **1C**: Spectrum Monitoring issues

- Studies in response to Question ITU-R 235/1 on Spectrum Monitoring Evolution, including impact of CRS on SMonit.
- Rec. ITU-R SM.2039 – Spectrum Monitoring Evolution ... Detection of Weak signals, Co-frequency Signal Separation ...
- Working towards a PDN Report ITU R SM.[SPEC_MON_EVOLUTION]



Future relevant ITU-R Meetings



(see the ITU-R Meetings schedule at www.itu.int/en/events/Pages/Calendar-Events.aspx?sector=ITU-R)



SG 1/WP 1B Workshop: Spectrum Management issues on the use of WS by CRS (1/3)



In the light of the results of WRC-12 agenda item 1.19, including Resolution ITU-R 58 and Recommendation 76 (WRC-12)

- To provide views on some spectrum management issues for the use of White Spaces by CRS in Radiocommunications
- Summary of the on-going ITU-R studies and presentations of experiences from case studies / trials / experiments on issues such as:
 - i) geo-location database;
 - ii) WS network authorization/licensing regime;
 - iii) protection of incumbent radiocommunication services;
 - iv) coordination in border areas;
 - v) economical aspects; etc.
- Related Regional activities

Webpage: www.itu.int/go/ITU-R/RWP1B-SMWSCRS-14



SG 1/WP 1B Workshop: Spectrum Management issues on the use of WS by CRS (2/3)



ITU-R SG 1/WP 1B Workshop: Spectrum Management issues on the use of White Spaces by Cognitive Radio Systems (Geneva, 20 January 2014, 14:00 to 18:15 hours) www.itu.int/go/ITU-R/RWP1B-SMWSCRS-14

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The purpose of the Workshop is to provide a high level view on some Spectrum Management issues for the use of White Spaces (WS) by Cognitive Radio Systems (CRS) in Radiocommunications, in the light of the results of RA-12 and WRC-12 agenda item 1.19, including Recommendation 76 (WRC-12) and Resolution ITU-R 58.

The Workshop will include a summary of the related on-going ITU-R studies, as well as presentations on the possible issues indicated in the programme. Experiences from case studies, experiments and/or trials, including some related regulatory aspects and regional activities, are planned to be provided.

It is expected that this Workshop will permit an open discussion of issues and ideas. It should be noted that the Workshop is not intended for the presentation of proposals/contributions to Working Party 1B.

Mr. Sergey Pastukh, Chairman, ITU-R SG 1
Mr. Naser Al-Rashedi, Chairman, ITU-R WP 1B



Invitation - Programme

Contacts

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REGISTRATION AND PARTICIPATION

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SG 1/WP 1B Workshop: Spectrum Management issues on the use of WS by CRS (3/3)



Programme

14:00-14:10 **Opening Session**

14:10-14:45 **Session 1 - ITU-R Studies**

- N. Al-Rashedi (SG 1) "Spectrum management studies, incl. RA-12 & WRC-12 related outcomes"
- J. Costa (SG 5) "Cognitive Radio Systems in the Terrestrial Services"
- J. Shaw (SG 6) "Opportunistic use of Spectrum – Horn of Plenty or Pandora's Box "

14:45-16:45* **Session 2 - Case Studies & Experiments/Trials**

- D. Tur (RUS) "Studies in the Russian Federation"
- A. Hart (TENET) "Cape Town TV White Spaces Trial"
- F. Zhiyong (CHN) "Cognitive Cellular Systems: Challenges, Solutions and Testbed"
- A. Yang (USA) "FCC's New Rules for TV White Space Devices & database updates"
- J. Beveridge (Microsoft Corp.), "Dynamic Spectrum Access (Linking Africa & Scotland)"
- M. A. Haji (KEN), "Licensing of TV White Space Networks in Kenya"

* including a break

16:45-18:00 **Session 3 - Harmonized use of CRS activities**

- Wang Tan (APT), "APT Wireless Group Activities on CRS & SDR"
- O. Kokotov (RCC) "CRS - Principles of coordination of in the border areas"
- E. Faussurier (CEPT) "Introduction of new spectrum sharing concepts: WSD & LSA"
- M. Saad Almarzooqi (UAE-ASMG) "Use of TV White Spaces by CRS - the UAE views"

18:00-18:15 **Summarizing and Closing Session**

Radio Regulations - 2012 Edition



Radio Regulations Edition of 2012











<http://www.itu.int/pub/R-REG->

The Radio Regulations, Edition of 2012, contains the complete texts of the Radio Regulations as adopted by the World Radiocommunication Conference (Geneva, 1995) (WRC-95) subsequently revised and approved by the World Radiocommunication Conference (Geneva, 1997) (WRC-97), the World Radiocommunication Conference (Istanbul, 2000) (WRC-2000), the World Radiocommunication Conference (Geneva, 2003) (WRC-03), the World Radiocommunication Conference (Geneva, 2007) (WRC-07) and the World Radiocommunication Conference (Geneva, 2012) (WRC-12), including all Appendices, Resolutions, Recommendations and ITU-R Recommendations incorporated by reference.

Available: end-November 2012. (Online versions in all 6 languages are free of charge --at least through mid-2014--as per ITU Council 2012's decision)



ITEM DETAIL		ARTICLE	PRICE	CART
MULTILINGUAL 	DVD including all 4 volumes, in all six official languages of ITU	37268	398 CHF	ADD
ENGLISH 	 Zipped PDF format		Free of charge	DOWNLOAD
	 Zipped MS Word format		Free of charge	DOWNLOAD
	A5 Paper (hard-copy complete set)	37262	398 CHF	ADD
ARABIC 			Free of charge	DOWNLOAD