Telecommunication
Development Bureau (BDT)

Ref. BDT/PKM/HCB/DM/354	Geneva, 12 September 2013

Administrations of ITU Members States,
Regulators and ITU-D Sector Members in Africa

Subject: **ITU/Rohde & Schwarz Workshop on "Implementation of radio monitoring systems according to ITU-R recommendations", Munich, Germany, 11-15 November 2013**

Dear Sir/Madam,

On behalf of the International Telecommunication Union (ITU) I am pleased to invite you to participate in a workshop on **"Implementation of radio monitoring systems according to ITU-R recommendations"** to be held in the "Technology Center" at Rohde & Schwarz (R&S) Headquarters, Munich, Germany, **from 11 to 15 November 2013** for the Africa region. The workshop is being conducted within the framework of a capacity building partnership entered into between ITU and Rohde & Schwarz GmbH & Co.

Due to developments in technology and to the growing popularity of wireless communication services, the demand for additional capacities within the radio spectrum has increased significantly. As the radio spectrum is a limited natural resource, proper spectrum management is crucial for obtaining an efficient telecommunications environment. In order to verify the compliance with the assigned spectrum authorities in all countries, there is a need for efficient radio monitoring systems. Thus, this workshop aims at providing participants with the knowledge on spectrum monitoring.

Among others, the following topics will be covered:

- Spectrum monitoring according to ITU Recommendations;
- Antennas for monitoring and DF;
- Receivers and spectrum analyzers;
- Radiolocation methods;
- Signal analysis;
- Spectrum monitoring systems;
- Interfaces between monitoring and spectrum management, SMS4DC;
- Installation aspects;
- Spectrum monitoring in Germany;
- Monitoring at major events;
- International cooperation in spectrum monitoring.

The draft agenda of the workshop is attached (Annex 1).

Target group

The workshop targets professional and technical staff from policymakers, operators and regulatory agencies responsible for planning, implementation and operation of spectrum monitoring systems. Participants must have at least 3 years of professional experience.

Registration

There is no training fee charged for participating in this workshop. To register for the workshop, you are kindly requested to fill the Registration form that can be found on the ITU Academy portal at http://academy.itu.int/index.php/component/k2/item/1143 and return it no later than **14 October 2013** according to the instructions indicated in the form.

Fellowship

I am pleased to inform you that ITU will provide one partial fellowship (covering only daily subsistence allowance) per Administration of Least Developed Countries (LDCs) and Low Income Countries (LIC), subject to availability of funds. Final selection of candidates will be carried out by ITU. Eligible participants are requested to apply by completing the Fellowship form available on the ITU Academy portal and returning it no later than **14 October 2013**.

Additional information

Please note that the workshop will be conducted in English only and participants are therefore required to have a good working knowledge of this language.

Additional information on this workshop, including a list of recommended hotels, can be found on the ITU Academy portal at http://academy.itu.int/index.php/component/k2/item/1143. Mrs. Kerstin Jüttner (Kerstin.juettner@rohde-schwarz.com; fax no. +49 89 4129 63009) or Mr. Hans von Geldern (hans.geldern@rohde-schwarz.com) are at your full disposal should you require any further information. Mr. Mike Nxele (mike.nxele@itu.int) is also available to respond to any queries you may have.

I am looking forward to your positive response and active participation in this workshop. I would highly appreciate if you could ensure distribution of this invitation to relevant stakeholders in your country that could benefit from this joint effort by ITU and R&S.

Yours faithfully,

[Original signed]

Brahima Sanou
Director

Annex 1: Draft programme

ITU/R&S Workshop on

**"IMPLEMENTATION OF RADIO MONITORING SYSTEMS
ACCORDING TO ITU-R RECOMMENDATIONS"**

Munich, Germany

11-15 November 2013

DRAFT PROGRAMME

Monday, 11 November 2013	
11:00 - 12:30	**Registration of Participants**
12:30 - 14:00	**LUNCH BREAK**
14:00 - 15:30	Welcome - Introduction to spectrum monitoring according to ITU-R recommendations
15:30 - 16:00	**COFFEE BREAK**
16:00 - 17:00	Antennas for monitoring and DF • Characteristics of ITU compliant monitoring antennas (antenna type, polarization, active/passive) • Characteristics of ITU compliant DF antennas (type of antenna array, active/passiv

Tuesday, 12 November 2013	
9:00 - 10:30	Receivers and spectrum analyzers • The importance of pre selection • Real time signal processing • Differences in operation between monitoring receivers and spectrum analyzers
10:30 - 11:00	**COFFEE BREAK**
11:00 - 12:30	Receivers and spectrum analyzers (continuation)
12:30 - 14:00	**LUNCH BREAK**
14:00 - 15:30	Radiolocation methods • Introduction to radiolocation methods • Introduction to DF methods • ITU recommendations on radiolocation methods

15:30 - 16:00	COFFEE BREAK
16:00 - 17:00	Radiolocation methods (continuation)

Wednesday, 13 November 2013

09:00 - 10:30	Signal analysis • Basics of signal analysis • ITU recommendations on signal analysis methods
10:30 - 11:00	COFFEE BREAK
11:00 - 12:30	Spectrum monitoring systems • Countrywide, fixed, mobile, portable, remote monitoring/DF systems
12:30 - 14:00	LUNCH BREAK
14:00 - 15:30	Interfaces between monitoring and spectrum management, SMS4DC
15:30 - 16:00	COFFEE BREAK
16:00 - 17:00	Hands-on (guided) • Practical exercises
19:00 - 23:00	SOCIAL EVENT

Thursday, 14 November 2013

09:00 - 10:30	Hands-on (guided) (continuation)
10:30 - 11:00	COFFEE BREAK
11:00 - 12:30	Installation aspects • Requirements on monitoring sites • Requirements on DF sites • Other installation aspects (example: lightning protection)
12:30 - 14:00	LUNCH BREAK
14:00 - 15:30	Spectrum monitoring in Germany • Tasks, organization, system configuration
15:30 - 16:00	COFFEE BREAK
16:00 - 17:00	Monitoring at major events • Tasks, organization, special deployment

Friday, 15 November 2013	
09:00 - 10:30	International cooperation in spectrum monitoring
10:30 - 11:00	**COFFEE BREAK**
11:00 - 12:30	Final discussion
12:30 - 14:00	**LUNCH BREAK AND FAREWELL**