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| **ITU Centres of Excellence Network for Asia and the Pacific****State Radio Monitoring Center - China****Training on****SPECTRUM MONITORING****Beijing, China (Peoples Republic of)****4 – 12 August 2015****TRAINING OUTLINE**  |

**COURSE DESCRIPTION**

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| Title  | ITU Asia-Pacific CoE Training Program on Spectrum Monitoring |
| Method of delivery | Face-to-face  |
| Objectives | * Understand the process and approaches to national spectrum monitoring issues.
* Identify, evaluate and select the appropriate technologies to establish and operate national spectrum monitoring network.
* Understand the appropriate principles and policies of an effective management of radio transmission equipment.
* Understand the procedures of spectrum monitoring activities in major events and special events.
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| Dates | 4 -12 August 2015 |
| Duration | 9 days (Sunday 9th August being a free day) |
| Registration deadline | 34d June 2015 |
| Training fees | Free of cost. No tuition charge for this training course however participant() should cover their travel and pay for accommodation for 40 US dollar per night  |

**LEARNING OUTCOMES**

This course covers the core functions of the spectrum monitoring and is therefore targeted towards the staff of National RF Monitoring / Spectrum Management agencies. Starting with the principles of spectrum monitoring, the course takes a deep dive into topics such as Monitoring network development, working procedures and participation in the major events. The overview of radio transmission equipment management and type approval test are also included. The training also provides an empowering learning environment through a combination of lectures and visit to the manufactory and operator focused on sharing information with the participants how to manage and operate the national spectrum monitoring issues.

**TARGET POPULATION**

Medium to senior level management from Government/Regulators responsible for National RF spectrum monitoring.

**TUTORS/INSTRUCTORS**

Please refer to agenda below for information on trainers per session. For detailed Biographies of instructors.

**EVALUATION**

The overall assessment is made up of four components. Two are based on the participants’ performance through administered tests and examinations, and the other two are based on the trainer’s evaluation of the participant.

1. **Participation** – The trainer allocates marks based on the participants’ level of involvement in group work and spontaneous quizzes during the course of the training. This component provides 30% towards the learner’s overall score.
2. **Attendance** - The trainer awards marks based on the rate at which the participant shows up in class based on the requirements of the course. This component provides 10% towards the overall score.
3. **Exam** - The exam is the final assessment of knowledge gained during the training. For this reason, it contributes the highest percentage of 60% to the overall score.

**The overall pass mark to be attained by participants is set at 60%.**

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| **Scores** | **Weighted Scores** |
| **Participation****(Group work and Quiz)** | **Attendance** | **Exam** | **Participation****(30%)** | **Attendance****(10%)** | **Exam****(60%)** | **Total Score** |

**TRAINING SCHEDULE AND CONTENTS / AGENDA**

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| **Item** | **Tutor/Speaker** |
| **Day 1- Opening and introduction to basics of Spectrum Monitoring****Tuesday (9:30 AM – 18:00 PM)** |
| 9:30-10:00 | Opening Remark | Dr. Jingchun Li |
| 10:00-10:30 | Group Photo and Break |  |
| 10:30-12:00 | Radio regulation in China | Dr. Feibo Xie(General director of BR, MIIT) |
| 14:00-14:45 | ITU Structure and study group | Mr. Aamir |
| 15:00-15:45 | Spectrum monitoring in China | Dr. Jingchun Li(Deputy General Director of SRMC) |
| 16:00-17:00 | Principle of spectrum monitoring | Mr. Hongtao Duan |
| 17:30-18:00 | Introduction of Beijing radio monitoring station |  |
| **Day 2-Strategy and Development of National Spectrum Monitoring capacity****Wednesday (9:00-17:30)** |
| 9:00-10:30 | Development of spectrum monitoring technology | Dr. Liang Chang |
| 11:00-12:30 | Construction, planning and siting of VHF/UHF monitoring network | Mr. Xiaofei Zhang |
| 14:00-15:30 | Spectrum monitoring activities for spectrum management | Dr. Jiaxin Ding |
| 16:00-17:30 | Spectrum management and monitoring during major events | Mr. Xiaodong Wang |
| 17:45-18:15 | Spectrum Management Trends | Mr. Aamir |
| **Day 3 - Management of Radio Transmission Equipment****Thursday (9:00-17:00)** |
| 9:00-10:00 | Radio equipment management in China | Mr. Junfeng Wang |
| 10:30-12:00 | Radio transmission equipment testing in China | Mr. Guocheng Chen |
| 14:00-15:30 | Test of spectrum monitoring equipment and direction finding system | Mr. Jingtao Wang |
| 15:30-17:00 | Visit China radio management history exhibition and State Radio Monitoring Center Testing Center (SRTC) |  |
| **Day 4- Interaction with Industry****Friday (9:00-17:00)** |
| 9:00-12:00 | Visit the manufacturer of spectrum management industry (Spectrum Management Tools and Spectrum Monitoring System) |  |
| 14:00-17:00 | Visit the Huawei Technologies (Beijing)  |  |
| **Day 5-Saturday** |
| All day | Culture Visit |  |
| **Day 6-Sunday** |  |
| All day | Free time (Shuttle service to city to be provided. For details contact SRMC focal point) |  |
| **Day 7-Spectrum Monitoring in different situations** **Monday(9:00-17:30)** |
| 9:00-10:30 | Case study of radio interference | Mr. Anping Li |
| 11:00-12:30 | ITU-R Recommendations and Reports on spectrum monitoring | Ms. Chao Luo |
| 14:00-15:30 | Construction and system function of Time Difference of Arrival (TDoA) monitoring network | Dr. Nan Xia |
| 16:00-17:30 | Signal analysis in the spectrum monitoring activity | R&S |
| **Day 8-Tuesday (9:00-17:30)** |
| 9:00-10:30 | **Group A**: View of operation of national HF, U/VHF, and Space monitoring network |  |
| **Group B**: Operation of monitoring equipment and systems |  |
| 11:00-12:30 | **Group A:** Operation of monitoring equipment and systems |  |
| **Group B:** View of operation of national HF, U/VHF, and Space monitoring network |  |
| 14:00-17:30 | Group discussion and exchange of know-how | Dr. Jingchun LiMr. Aamir |
| **Day 9-Wednesday (9:30-16:00)** |  |
| 9:30-11:00 | Examination | Mr. Jia Huang |
| 14:00-16:00 | Closing SessionDistribution of Class Evaluation, Certificates | Dr. Jingchun Li |

**METHODOLOGY**

The training will include Instructor-led presentations, case studies, group exercises, study visits (as per the program above), and evaluations.

All training materials would be provided to the participants at least in soft form.

**TRAINING COORDINATION**

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| **SRMC Focal point:** Ms. Yu YaliTel: +86 10 6800 9053Fax: +86 10 6800 9299E-mail: yuyali@srrc.org.cn | **ITU coordinator:**Mr. Aamir Riaz Tel. +62 21 380 2322 / 380 2324Fax +62 21 3890 5521E-mail: aamir.riaz@itu.int |

**Other information**

**Location**: Beijing Radio Monitoring Station, Beijing - People’s Republic of China

**Number of trainees from outside China**: not more than 30

**Language of instruction**: English