BDT Activities on Spectrum Management

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Recent Activities
on Spectrum Management

➢ Spectrum Management Master Plan (SM MP)

➢ Spectrum Management Software (SMS4DC)

➢ Cross-border frequency coordination (HCM4A)

➢ Spectrum Management Training Program (SMTP)

➢ Spectrum fee

Spectrum Management Master Plan

ITU-KOREA Projects

SM Master Plan Project in Caribbean

➤ **Increasing need of efficient spectrum management**

- Many countries adopted new approaches: unified licensing, market based spectrum allocation, technical neutrality, cognitive radio systems
- Requires resources and skills to update national spectrum management frameworks

➤ **ITU Global and Regional Objectives**

- *WTDC-14 Dubai Action Plan Objective 2:* To foster an enabling environment for ICT development and foster the development of telecommunications/ICT networks, including enhancing awareness and capability of countries in the fields of spectrum planning and assignment, spectrum management and radio monitoring
- *AMERICA Regional Initiative 2:* To provide assistance in the transition to digital broadcasting and spectrum management, including support for the elaboration of spectrum-management plans at the national, regional and global levels

SM Master Plan Project in ASP

- ➢ **SM Master Plan Project in ASP (3 countries)**

- ➢ **ASP Regional Initiative 5:** Policy and regulation

- ➢ **Project Status**
  - • **Bangladesh**
    - • 2 missions, Master Plan prepared
  - • **Fiji**
    - • 2 missions, Master Plan under development
  - • **Brunei**
    - • 1st mission done, second in May

- ➢ **Project extension signing during PP-14**
  - • Additional Funding and modified targets of the project
  - • Three more countries evaluated to be the beneficiary of the technical assistance (**Pakistan**, **Thailand** and **Vietnam**)

Objectives and Targets

➢ To assist governments and regulators of developing countries in the Americas Region (in particular on Caribbean Countries) and in Asia-Pacific region in developing national spectrum management master plans

➢ At least for 3 beneficiary countries (6 now for **ASP**)
  ➢ Assessment of the spectrum management scheme: spectrum policy, spectrum use, authorization, spectrum sharing, spectrum monitoring…
  ➢ Provision of advices concerning each beneficiary country's development of relevant policies, legislations and regulations based on request and interest of the countries

➢ Human capacity building [3 seminars, 60 participants in total]

➢ Provision of guidance during implementation of the master plans, where requested by beneficiary country and agreed by ITU

Selection of Beneficiary Countries

- ➢ **Selection Criteria** (tentative)
  - • Reply to ITU Questionnaire: Yes
  - • Willingness to work with ITU: Yes
  - • Capacity to devote relevant and qualified internal resources to develop and implement SM Master Plan: 1(least) - 5(most)
  - • Legal framework readiness and spectrum usage: 1 – 5 (low usage, no legal framework: 1)
  - • Representativeness of the region
- ➢ **Selection Procedure**
  - • Sending Questionnaire:
    - • ITU-Caribbean (March 2015)
    - • ITU- ASP Jan 2014 and Dec 2014- Jan 2015
  - • Recommendation of 3 beneficiary countries: ITU-Caribbean in consultation with CTU (April 2015)
  - • Selection of beneficiary countries: ITU-HQ (based on ITU-CTU proposal for Americas region) with consent from MSIP, republic of Korea (May 2015)

Activities

- Job Description and Experts recruitment: ITU in consultation with beneficiary countries and CTU for Americas region
- 1st phase focused on assessment of overall aspects: data gathering, 5 days mission (meeting with Government, interviews with stakeholders), preparation of a draft (results of the CTU SM Task Force documents/reports will be taken into account in order to avoid duplication)
- 2nd phase focused on a Master Plan for specific recommendation reflecting request and interest of beneficiary countries: preparation of advices, 5 days mission (presentation and discussion), preparing final report
- Comment and Approval: review and comments by ITU and CTU for Americas region, approval of governments for the release of final report
- Seminars: topics and materials will be decided in consultation with experts and beneficiary countries (in cooperation with CTU for Americas region)
- Assistance: to beneficiary countries for the preparation of implementation plans for Master plans; on request

Roles and Responsibilities

- ➢ ITU
    - • Selection of beneficiary countries, recruitment of experts, provision of staff resources for overall project management, approval of the report
    - • Organizing the Seminars
- ➢ MSIP
    - • Cash contribution
    - • Collaborate with ITU in the selection of countries and experts
- ➢ CTU (for Americas region only)
    - • Recommend beneficiary countries and experts
    - • Comments on the scope of the reports, seminars and the contents of the reports
- ➢ Beneficiary Countries
    - • Designate a qualified counterpart work with ITU
    - • Provide access to the relevant information and materials
    - • Provide administrative support including staff, visa, premises for the interview and training, etc.

Report Framework (1)

Executive summary

1. Introduction

    1.1 The context and scope for the study

    1.2 Report contents

2. Global trends in Radio Spectrum Management

    2.1 Administrative processes

    2.2 Existing and new licensing policies (including DSA, LSA, white space)

    2.3 Fees

    2.4 Market mechanisms

    2.5 Policy in respect of non-commercial use

3. Current Spectrum Management Framework

    3.1 Legislative framework

    3.2 Process (including internal coordination with stake-holders)

    3.3 Licensing

    3.4 Spectrum fee

Report Framework (2)

3.5 Monitoring, type approval and enforcement

3.6 Cross-border frequency coordination

3.7 Spectrum policy, management issues and strategy (if exists)

4. Current spectrum demand and issues - by sector/service

4.1 Data sources used in analysis

4.2 NTFA (National Table of Frequency Allocation)

4.3 Analysis of current spectrum use

4.4 Issues identified by Stakeholders in relation to frequency use

4.5 Conclusions, issues to deal with during the assistance

5. Future demands for spectrum

5.1 Spectrum Demand Trends by Sector/Service

6. Recommendations and Key issues

6.1 Allocation Policy

6.1.1 Improving information on spectrum allocations and policy

6.1.2 Making allocation decisions

Report Framework (3)

6.1.2.1 Role of ITU and other international and regional organizations

6.1.2.2 Role of local investors and spectrum users

6.1.2.3 Unique needs of the country

6.1.2.4 Cross-border frequency coordination agreements

6.1.3 Consultation arrangements

6.1.4 Balance between government and commercial allocations

6.2 Assignment , licensing, monitoring and enforcement

6.2.1 Policy principles

6.2.2 Licensing policy and fees

6.2.3 Planning and licensing processes

6.2.4 Monitoring, type approval and enforcement processes

6.3 Spectrum management strategy

6.4 Capacity building

Annexes

Abbreviations

Spectrum Management System for Developing Countries (SMS4DC)

ITU-KOREA Project

Development of version 5

New features to add (1)

- Addition of a general data interface between monitoring software and SMS4DC based on the guidelines prepared for ITU-R Study Group 1/Working Party 1C (ITU-R SG1/WP1C
- Adding propagation models based on the latest version of P.452, P.530 and P. 1812, P.1546 + 11343
- Inclusion of Dynamic Link Library (dll) for Harmonised Calculation Method (HCM)
- Further development of built-in and user specified administrative reports
- Preparation of a general method to import data to SMS4DC
- Insertion of fee calculation models

Development of version 5

New features to add (2)

- Website design in order to provide relevant news and a forum for users to discuss their experiences. Renewal of subscription via web
- Preparation of the SMS4DC software in Spanish
- Preparation and approval of a protocol for testing and finally approving the revised version of the SMS4DC software
- Time limited version as a demo tool which can be used for introduction of SMS4DC
- Preparation of the training material (as a multimedia DVD) for assisting self-learning training of the software.

Cross-border Frequency Coordination concept (based on HCM)

Planned ITU-KOREA Project

Cross Border RF Interference Mitigation in ASEAN (Project concept)

✖ **AIM**

+ Develop a harmonized common approach/procedures/framework in ASEAN Member Countries that predicts possible interferences among different services and provide proper protection for existing networks, stations or links and for future services.

✖ **Scope of Activities**

1. **Assessment Phase:** Review of existing bilateral and multilateral cross-border frequency coordination agreements / procedures / practices / frameworks in ASEAN countries.

2. **Development of procedures:** Based on the deliverables of assessment phase, Recommend on a common administrative set of procedures and the relevant technical Annexes based on the HCM Agreement

3. **Creation of a Technical Working Group (TWG)** on cross-border frequency coordination comprising of the nominated Spectrum Managers from ASEAN countries.

4. **Validation workshop and adoption of the recommendations of TWG** including development and adaptation of a common software tool considering existing Agreement/ procedures / guidelines / practices in other regions of the world.

5. **Finalization of software and regional training workshop(s)**

EUR RI 2015, Budapest

Cross Border RF Interference Mitigation in ASEAN (Project concept)

- **Partners**
  - ITU
  - ICT Administrations and/or Spectrum Management organizations of ASEAN countries
  - Project Funding partners (tbc)
- **Key Stakeholders**
  - ASEAN Secretariat
  - Major RF users and Licensees of Administrations of ASEAN countries
  - Others including Academia, APT, CAAs, UN agencies e.g. ICAO etc. (HCM group can also cooperate if needed)

Spectrum Management Training Program

SMTP

Pilot Test

- OM1 "Legal Basis and Regulatory Framework of Spectrum Management" – online, English
  - Test the usability of the programme, pedagogical and assessment components and incorporate comments that will come from users.
  - December 2014 – January 2015
  - PPT of PowerPoint presentations, reading materials and presentation video
  - 4 Weeks, 3 sub-modules/week
  - Chat (2/weeks) and discussion forum
  - Test for each week
  - Evaluation form
  - https://academy.itu.int/news/item/1593/

  Promotional video on SMTP

Other activities (1)

Regional Workshop on Spectrum Management and Transition to Digital Terrestrial Television Broadcasting for Europe

Budapest, Hungary, 5-7 May 2015

- Digital terrestrial television transition;
- Utilization of the Digital dividend;
- Post transition activities
- Spectrum management structure and tools

http://www.itu.int/en/ITU-D/Regional-Presence/Europe/

Other activities (2)

- CTU SM Task Force
  - Regional and national table of frequency allocation
  - Cross-border frequency coordination
  - Spectrum pricing
  - Digital switch-over and white space management
- ITU-T SG3: Spectrum fee
  - BR and BDT presentations on the relevant activities
  - Country Assistance to Bhutan on spectrum fee
- Country Assistances
  - Review of National Spectrum practices for efficient SM in Bhutan (Feb-Mar 2015)
  - NTFA Update to Vanuatu (Sep 2014)
- Planned events
  - Satellite Launch Coordination Procedures and International Regulations with SRMC – China (June 2015 online course)
  - Face to Face RF monitoring training in SRMC China (4 -13 August 2015)
  - ITU-APT event on Spectrum management and DTV in Pacific (Fiji, dates to be finalized)

THANK YOU !!

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