A cross Border Frequency Coordination Agreement

ITU Workshop on cross border Radio Frequency Management in Arab States

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Dubai, United Arab Emirates

International Telecommunication Union

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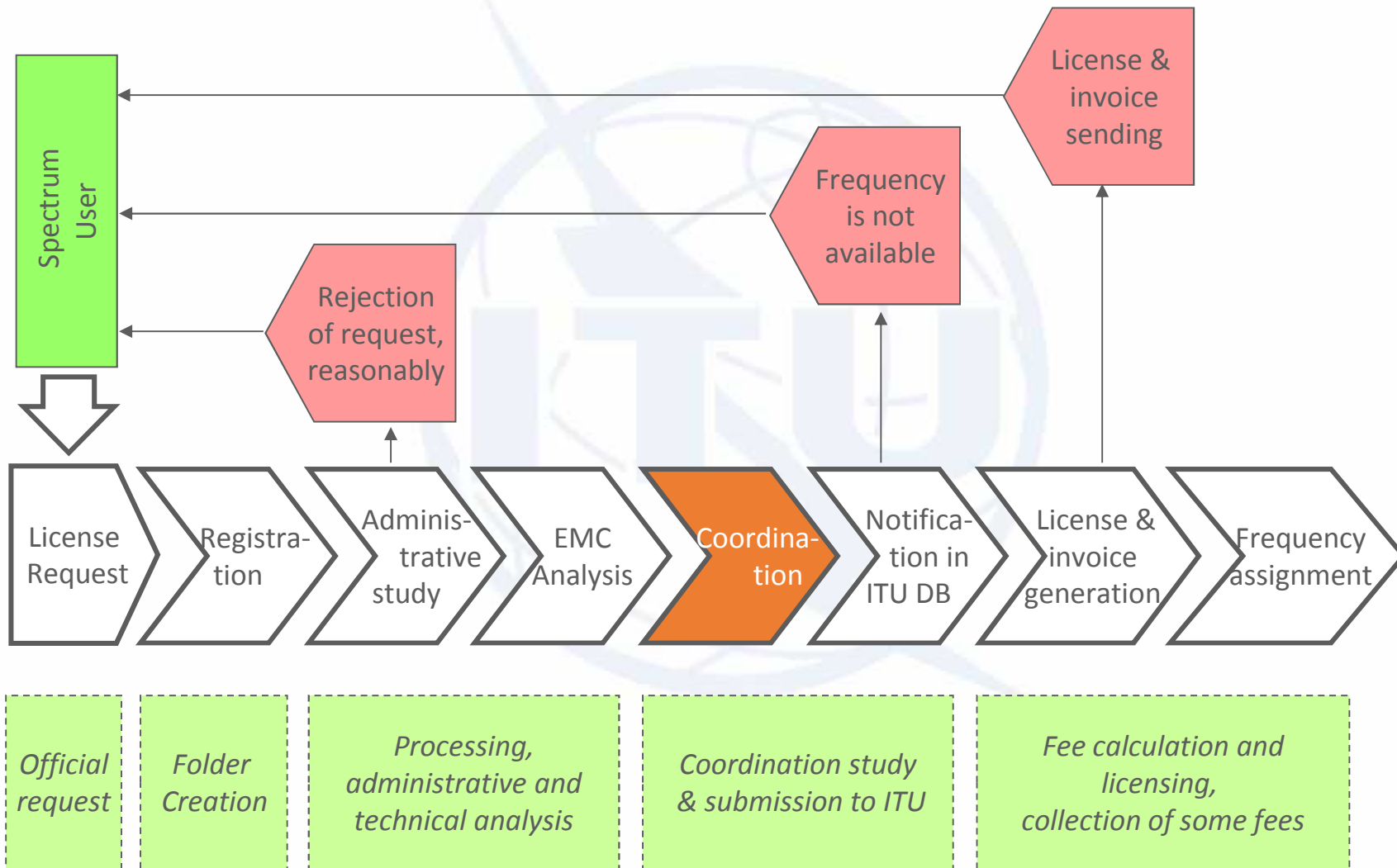International Telecommunication Union Regional Office for Asia and the Pacific

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What to expect in these slides

- Where does Coordination stand in National Licensing workflow

- What principle to apply for Coordination

- What to consider in a regional/multi-lateral cross border co-ordination agreement

Example - National Spectrum Licensing workflow

Spectrum User

License & invoice sending

Frequency is not available

Rejection of request, reasonably

License Request → Registra-tion → Adminis-trative study → EMC Analysis → Coordina-tion → Notifica-tion in ITU DB → License & invoice generation → Frequency assignment

| Official request | Folder Creation | Processing, administrative and technical analysis | Coordination study & submission to ITU | Fee calculation and licensing, collection of some fees |

Example - National Spectrum Licensing workflow

✖ **Request for Licensing received by office**

+ *Ensure all the technical parameters are there in application (establish a minimum required info. criteria)*

+ *Detailed backend technical evaluation*

Need for Coordination Established

General overview of coordination

Co-ordination request and all technical characteristics
of radio network/equipment sent to all
administrations affected to
enable accurate assessment of interference

Administrations affected assess possibility of
interference to own stations;

**No possibility of interference: obliged to
agree to request**

If assessments produce different results,
administrations can agree to operation on a trial
basis; **field strength calculations replaced with
agreed field strength measurements**

A cross border Agreement - Components

➢ **Definitions**

▪ Terms used in the agreement :
Preferably same as in the RR

▪ Full Details of Administration involved in the Agreement
Full Name etc.

▪ Details of Frequencies with repect to each radio services covered by the agreement

▪ Categories of frequencies for coordination
  o *Preferential frequencies*
  o *Shared frequencies*
  o *Frequencies for planned radio communication networks*
  o *Frequencies used on the basis of geographical network plans*
  o *Frequencies used on the basis of arrangements between operators*
  o *Others*

A cross border Agreement - Components

➢ **Definitions**

▪ Frequency Register

The Frequency Register cosnists of lists set out by every Administration indicating its co-ordinated frequencies as per the categorization of frequencies

▪ Other articles defining:
  o *Administration affected*
  o *Harmful interference*
  o *HCM Programs*
  o *Data Exchange*

Annexures could be used for Details

A cross border Agreement - Components

➢ **General**

▪ Set out responsibility of each Administration invovled in following clauses of the Agreements andits procedure

▪ May also clearly define that this agreement/framework in no way affects the rights and obligations of the Administrations arising from other international, regional, multilateral, bilateral and intergovernmental agreements

> A coordination agreement on regional level should be **flexible** enough to allow the countries involved in bilateral coordination to change the mentioned coordination arrangements e.g. time limits with mutual consent

A cross border Agreement - Components

➤ **Technical Provisions**

▪ Articles related to the technical co-ordination of a radio station and the evaluation with reference to relevant applicable Annexes for detials

➤ **Procedures**

▪ Detailed Administrative and technical with clearly defined time limits for each procedure of RF coordination.

▪ Preferred way is to provide the procedural details in accordance to each category of frequencies

A cross border Agreement - Components

➢ **Others Provisions:**

- Report of harmful interference

- Revision of this Agreement

- Accession to this Agreement

- Withdrawal from this Agreement

- Status of co-ordinations prior to this Agreement

- Languages of the Agreement

- Entry into force of Agreement

A cross border Agreement - Components

➢ **Annexes**

▪ Can be categorized with respect to the RF services involved in the agreement

▪ Contain all technical details

▪ Example of Annexures:

  o *Maximum permissible interference field strengths and maximum cross-border ranges of harmful interference for frequencies requiring co-ordination*
  o *Data exchange (methods and details of the contents of the lists)*
  o *Measurement procedures*
  o *Propagation curves to be used for coordination w.r.t each service*
  o *Determination of the interference field strength*
  o *Coding instructions for antenna diagrams*
  o *Method for combining the horizontal and vertical antenna*
  o *Triggers for co-ordination in the Fixed Service*

A cross border Agreement - Components

1. **Definitions**
2. **General**
3. **Technical provisions**
4. **Procedures**
5. **Report of harmful interference**
6. **Revision of this Agreement**
7. **Accession to this Agreement**
8. **Withdrawal from this Agreement**
9. **Status of co-ordinations prior to this Agreement**
10. **Languages of the Agreement**
11. **Entry into force of Agreement**
12. **Annexes for technical and administrative details**

Rec. ITU-R SM.1049-1
(A METHOD OF SPECTRUM MANAGEMENT TO BE USED FOR AIDING FREQUENCY ASSIGNMENT FOR TERRESTRIAL SERVICES IN BORDER AREAS)

I Thank U

"Committed to connecting the WORLD"

Major ITU-ASP SM Events in 2017

ITU COE online training on Spectrum Management (Legal and wireless innovation Issues)
13 - 24 February 2017

ITU COE training on Spectrum Engineering and Cross border Coordination
Xian, China, May 2017

ITU-Forum Global regional workshop on Spectrum Management
Bangkok-Thailand, Q2/3 2017

ITU Study Group Meetings
ITU-D (Res. 9) and ITU-R SG1

Your active participation in and contribution to these events is most welcome!