



Frequency Co-ordination: *Advantages and Disadvantages*

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What to expect in these slides

- × **Advantages of Coordination**
 - × **How coordinated use of Monitoring infrastructure could help**
 - × **Disadvantages of coordination**
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Advantages of Coordination

- × AIM: **Optimise spectrum usage**
- × Administrations obliged to co-ordinate frequencies before assigning them
- × Administrations obliged to ensure harmonised application of technical provisions
- × Quick assignment of preferential frequencies
- × Transparent decisions through agreed assessment procedures
- × Quick assessment of interference through data exchange



Advantages of Coordination

- × **The agreement may also cover issues related to coordinated use of Infrastructure belonging to different Admins for RF monitoring**

Neighboring countries are increasingly endeavoring to provide harmonized radio communications to facilitate cross-frontier operations by adopting common specifications. This phenomenon is a very marked one encourages the countries concerned to set up harmonized or even integrated monitoring facilities by using identical procedures and, under certain circumstances, a common infrastructure.

This would make monitoring services more efficient and also lead to lower and, therefore, more readily acceptable financial investments for monitoring infrastructure.

- × **Resolution ITU-R 23 refers to the need of**

Cooperation between monitoring stations of different administrations should be encouraged and improved with a view to exchanging monitoring information concerning terrestrial and space stations emissions, and to settling harmful interference caused by transmitting stations that are difficult to identify or cannot be identified;



Advantages of Coordination

Coordinated use of Infrastructure belonging to different Admins for Monitoring: **Examples**

× Collaboration below 30 MHz

- **Avoiding overlapping of activities by monitoring stations covering the same area**

close cooperation can be organized between these stations so that they can take part, in turn, in a specific monitoring programme. For this purpose, the part of the spectrum to be monitored can be divided into sub-bands that each monitoring station taking part in the programme will explore in turn in accordance with a predetermined timetable

- **Arrangements can be implemented either for particular purposes, for instance during special monitoring programmes organized by the Bureau, or they can be of a more permanent nature**
 - **Determination of the location of a transmitter and its identification, particularly in the case of harmful interference**
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Advantages of Coordination

× Collaboration Above 30 MHz

• First category:

Cases in which the regional authorities on both sides of the frontier are authorized to enter into direct contact, for example, only when the frequencies concerned are the direct responsibility of the regional center (frequencies to be specified), on the basis of RR No. 16.3; the cooperation can be to

- *carry out measurements from their own territory on transmitters in the neighboring country, at its request, and transmitting the results to it;*
- *authorizing a mobile team from the neighboring country to come and take measurements*
- *itself;*
- *mutual assistance in both cases.*

• Second category:

- *Joint establishment of a plan for the distribution of monitoring stations in frontier areas;*
 - *Definition of the interfaces to enable each country to take measurements of transmitters located on its own territory from any station in the frontier area;*
 - *Establishment of a schedule for installing harmonized monitoring facilities.*
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Advantages of Coordination

- **Third category:**

- *Exchange of lists of authorized networks in the frontier areas of each country, together with their*
- *Technical characteristics, so that “foreign” transmitters are no longer regarded as unknown;*
- *Exchange of such lists using automatic remote data transmission procedures.*

The first category is to be regarded as the initial step while the second and third categories constitute longerterm objectives.

Arrangements of this kind exist in many parts of the world, particularly in congested areas.

- The longstanding arrangements among Canada, Mexico, and the USA constitute a typical example of such cooperation.
 - The need for such collaboration is also exigent in the European area where, for instance, France, Germany and Switzerland entered into an agreement of the first category in 1993
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Dis-advantages of Coordination

- × Increase in administrative work and costs (complex procedures, longer turnaround times, topographical database)
 - × Detailed input data required from operators (geographical data, antenna parameters)
 - × Complex operational conditions, assignments subject to diverging conditions
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Dis-advantages of Coordination

- × **Customers affected by changes in usage rights:
Various consequences**
 - × **Limits also to preferential frequencies, limits may vary
from case to case**
 - × **Use of other countries' preferential frequencies
currently not allowed (restrictions in frequency
assignment)**
 - × **More work in application processing.**
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Major ITU 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!