



International Telecommunication Union (ITU)

**ITU Radio Regulations:
“*First Come, First Served*” Concept and
Equitable Access to Spectrum/Orbit Resources**

Technical Presentation

59th session of the Scientific and Technical Subcommittee
of the Committee on the Peaceful Uses of Outer Space

14 February 2022



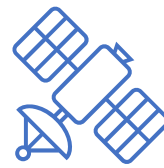
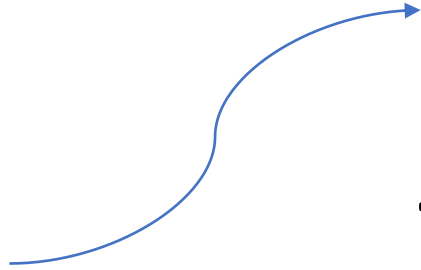
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The “*First Come, First Served*” approach in the ITU cooperative system

Presentation Overview



**1. ITU Procedures
to access
spectrum/orbit
resources**



**2. Three-Step
cooperative
system**

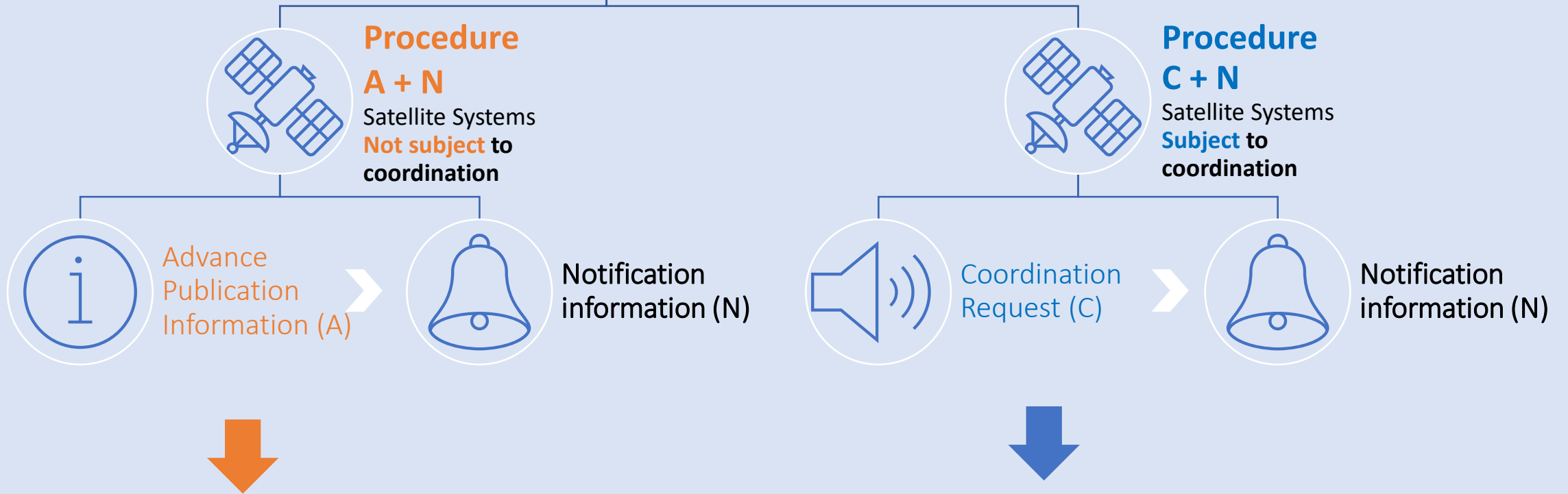


**3. A Balance between
the rights and
obligations**



ITU Procedures to Access Spectrum/Orbit Resources *

Processes laid down in Articles 9 and 11 of the Radio Regulations



Procedure

A + N

Satellite Systems
Not subject to coordination

Procedure

C + N

Satellite Systems
Subject to coordination



A Cooperative System

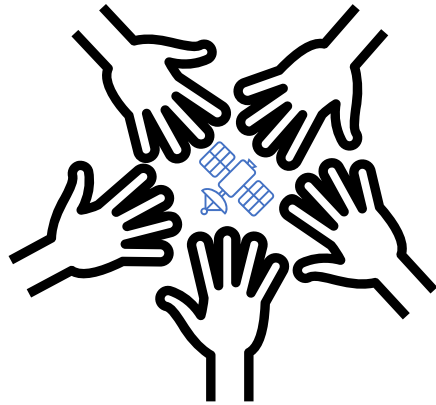
These 2 ITU procedures **A + N** and **C + N** constitute a cooperative system

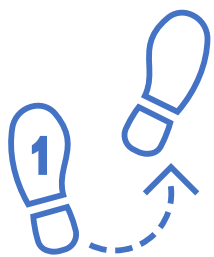
+ Collaboration

ITU Member States collaborate to allow satellite systems to operate in **space free from radio interference**

+ A 3-Step Approach

This cooperative system can broadly be characterized by three main steps



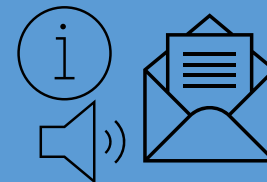


Step 1)

Radio frequencies planned to be used in a satellite project

An ITU Member State

sends a **description** (contained either in an *Advance Publication Information (A)* or a *Coordination (C)* submission)



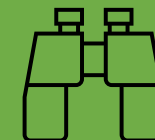
The ITU Radiocommunication Bureau

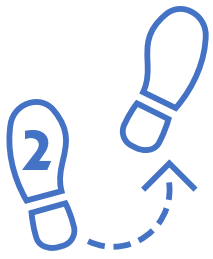
then examines the conformity with the **Radio Regulations** and publishes the description and the findings in its **Circular named *BR IFIC***



All Other

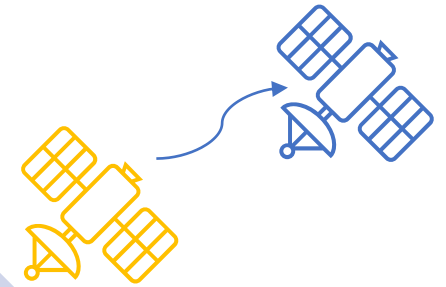
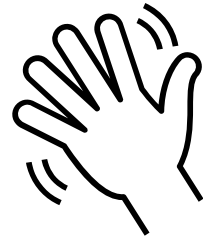
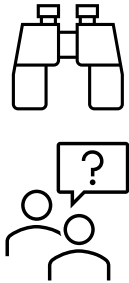
ITU Member States can **examine this satellite project**





Step 2)

Bilateral Discussions



Identification of potential interference

Member States with satellite systems existing, or planned and already submitted to the Bureau

Bilateral Discussions

Contact between ITU Member State in order to discuss technical solutions

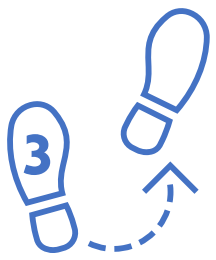
“the requesting and responding administrations shall make every possible mutual effort to overcome the difficulties, in a manner acceptable to the parties concerned” (see No. 9.53).

Then satellite systems can coexist without interfering to each other

Radio Regulations

The Rules of Procedure on No. 9.6 provide further clarifications about the meaning and purpose of No. 9.53:

- a) “the intent of Nos. 9.6 (9.7 to 9.21), 9.27 and Appendix 5 is to identify to which administrations a request for **coordination** is to be addressed, and **not** to state an order of priorities for rights to a particular orbital position”;
- b) “the coordination process is a **two way process**”; and
- c) “in the application of **Article 9, no administration obtains any particular priority** as a result of being the first to start either the advance publication phase (Section I of Article 9) or the request for coordination procedure (Section II of Article 9)”.



Step 3)

The Legal Rights




From the outcome of the bilateral discussions 

Notification (N) of coordinated frequency assignments to the ITU Bureau  

Recording of frequency assignments and associated orbits in the ITU Master Register (MIFR) 

Legal rights to international recognition obtained 

To avoid spectrum warehousing, a time limit of 7 years is set to notify and bring into use frequency assignments to space services 

Radio Regulations

The Legal Rights

No. 8.1, “*the international rights and obligations of administrations in respect of their own and other administrations’ frequency assignments (...) shall be **derived from** the recording of those assignments in the Master International Frequency Register (the Master Register) or from their conformity, where appropriate, with a plan. Such rights shall be **conditioned by** the provisions of these Regulations and those of any relevant frequency allotment or assignment plan.*”

and No. 8.3 “*Any frequency assignment recorded in the Master Register with a **favourable finding under No. 11.31 shall have the right to international recognition**. For such an assignment, this right means that other administrations shall take it into account when making their own assignments, in order to avoid harmful interference. In addition, frequency assignments in frequency bands subject to coordination or to a plan shall have a status derived from the application of the procedures relating to the coordination or associated with the plan.*”

Why “*first-come-first-served*” is oversimplification?

The ITU cooperative system is often referred as “*first-come-first-served*” but this expression tends to oversimplify the actual system

1. The ITU cooperative system relies on a “*first-come-first-served*” approach **only for the identification of the satellite networks with which a newcomer has to discuss/coordinate.**

2. Article 11 (Notification (N)) contains provisions to address cases where the **discussions** initiated following the application of Article 9 (Coordination (C)) have **not yet been concluded at the time of notification** (see Nos. 11.32A and 11.41).

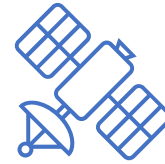
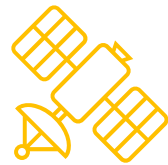


When envisaged as a complete set, the procedures contained in Articles 9 and 11 of the Radio Regulations for the space systems strike a **balance between the rights and obligations of incumbents and newcomers.**

An example of balance between the rights and obligations

The operations of a satellite recorded in the Master Register under No. 11.41 are subject to regulatory conditions set forth in No. 11.42

(i.e. *immediate elimination by the new administration of any harmful interference originating from its system*)



but they are balanced by the requirement for the incumbent administration to provide the particulars relating to the **harmful interference**

(i.e. *to gather evidence supporting its claim of an harmful interference event*).

It should be noted that, while this regulatory framework applies to both geostationary and non-geostationary satellite systems, **spectrum monitoring techniques may be more complex in cases involving non-geostationary satellite systems.**



In conclusion

The ITU Procedure to access spectrum/orbit resources is **a balance between the rights and obligations of both the incumbent administration and the new administration.**

The “*first-come-first-served*” approach only applies for the identification of the satellite networks with which a newcomer has to discuss/coordinate. No administration obtains any particular priority as a result of being the first to start an ITU procedure.

