

Space Plans and Lists?

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ITU Constitution

- Article 44
 - Radio frequencies and any associated orbits are **limited** natural resources
 - Must be used **rationally, efficiently and economically** in conformity with the RR
 - To have **equitable access** to those resources

- Article 45
 - **Not to cause harmful interference** to the service operating in accordance with the RR

Radio Regulations

Mechanism to control interference

- Allocation
- Coordination / **Plan**
- Technical and operational limits

- Licensing
- Monitoring



Coordination vs. Plan

■ Coordination Approach

- First come, first served based on current requirement
- **Efficient/
economical**

■ Planning Approach

- Distribution of resources based on current and future requirement
- **Equitable access**

Space Plans approach

For specific space services - frequency bands

- AP30/30A Plan
 - BSS and feeder-link
 - 11.7-12.2 GHz(Region 3),
11.7-12.5 GHz(Region 1),
12.2-12.7 GHz(Region 2),
17.3-18.1 GHz(Region 1&3),
17.3-17.8 GHz(Region 2),
14.5-14.8 GHz(Region 1&3
except Europe)
- AP30B Plan
 - FSS
 - 4.500-4.800 GHz
6.725-7.025 GHz

10.70-10.95 GHz
11.20-11.45 GHz

12.75-13.25 GHz

Some features of Plans Procedures

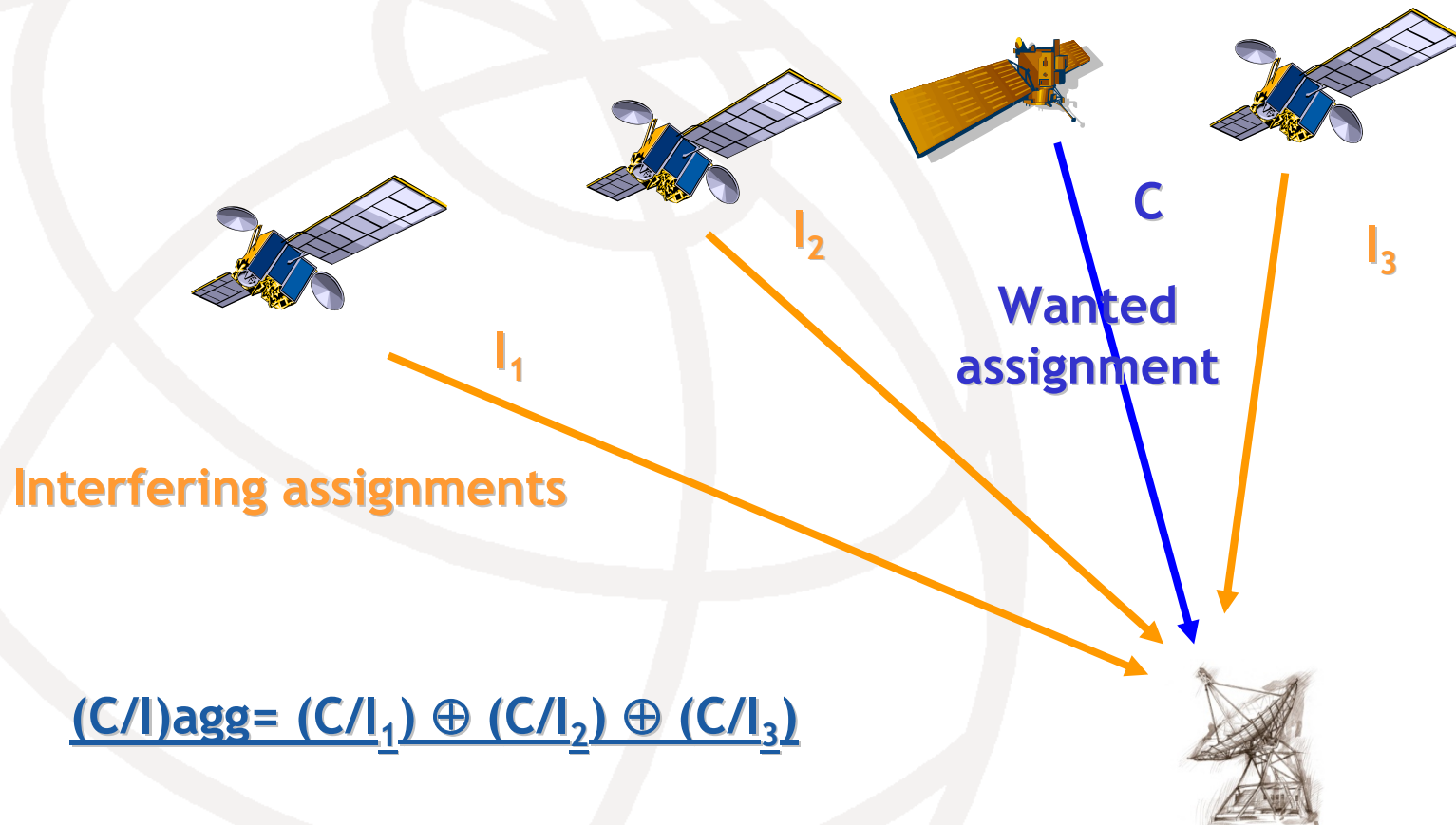
- Guarantee of equitable access
 - Beam to cover national territory
- Reservation of capacity for future use
 - In many cases Plan assignments are not in operation but will not be cancelled
 - Standard parameters (assumption) are required
- Aggregate C/I is used to maximize capacity
- Protection is given based on Plan characteristics (not characteristics in MIFR)

Standard parameters

Main assumptions (with some exceptions)

- **Same amount of frequency band for each beam**
- **National coverage**
- **Elliptical beam using defined space station antenna pattern**
- **Defined C/N**
- **Same values of system noise temperature**
- **Similar power level**
- **Defined earth station antenna size and pattern**
- **Defined Aggregate C/I**

Aggregate C/I





AP30/30A vs. AP30B approach

■ AP30/30A

- Plans separated by Regions
- Shared with other space services in other Regions
- Cluster concept in R2 Plan

■ AP30B

- World wide
- Allotment (conversion to assignment)
- Single entry



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Any Question?

$$\text{Operator } \oplus : A \oplus B = -10 \log \left(10^{-A/10} + 10^{-B/10} \right)$$

Return