The role of ITU and Cleaning up the MIFR and Lists

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The role of ITU

Importance of ITU

Importance of having transparent and predictable rules,
applied to everyone in the same manner

# Efficient spectrum usage and equitable access

ITU Constitution, Art. 44 §196

In using frequency bands for radio services, Member States shall bear in mind that radio frequencies and any associated orbits, including the geostationary-satellite orbit, are limited natural resources and that they <u>must be used rationally, efficiently and economically</u>, in conformity with the provisions of the Radio Regulations, <u>so that countries or groups of countries may have equitable access</u> to those orbits and frequencies, taking into account the special needs of the developing countries and the geographical situation of particular countries.

What are the objectives and what are the means?

Efficient spectrum usage ← → Equitable access
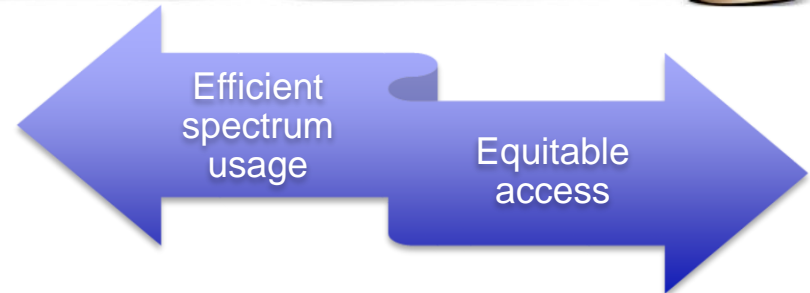
- Sometimes, measures to achieve the two can be in contradiction to each other

- Is equitable access the same as equal access ?

  - Access for all according to their needs ?
  - $\text{Access} = \dfrac{\text{Total amount of orbit spectrum resources}}{\text{Number of ITU-R Member States}}$?

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Do satellite operators want ITU?

- Satellites are expensive
- Satellites generally need to serve many countries to be economically viable
- A predictable international environment and known financial risks are important for investments to the satellite industry
- Harmonized rules and regulations are important in enabling efficient operation
- Interference and spectrum resources access are international nature
- National legislation alone normally cannot handle satellite interests in a satisfactory manner
- An international regime governing satellite operation in an orderly and predictable manner is important for satellite operators and the satellite industry
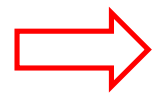
Satellite operators want ITU
       - AND an ITU that has an impact

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Authority and impact of ITU

- Formally, access to spectrum capacity is obtained through application of the procedures of the Radio Regulations

- As of today, the procedures of the Radio Regulations are generally seen to be observed

- As the orbit resources becomes more and more congested, getting access to spectrum capacity becomes more and more difficult

- Some networks brought into use without due coordination interfere with (and are interfered by) operational systems

- In a congested situation, practical, detailed coordination is conducted;
  - only with respect to really affected networks
  - networks that are just formally affected and "paper satellites" are less taken into account

Threats to the authority of ITU and the respect for the RR

- "Unreasonable" requirements of the Radio Regulations
- Over protective coordination triggers
- Limitations on establishing multi-country and international service areas
- Queue jumping, higher priority to filings of some administrations
- Reduced protection for administrations;
  - with filings in adjacent orbit locations (no grouping)
  - with multiple filings
  - when giving a coordination agreement (reference situation)
- Hard Limits on number of networks, e.g. in MIFR or under coordination irrespective of operational networks and actual requirements of an administration
- Hard time limits for networks in MIFR/List, even if the network is operational at the end of the time period
- Planned bands that leave a lot of orbit spectrum resources unused, yet unavailable for real satellite networks

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Threats to the authority of ITU and the respect for the RR

- Some administrations provide false information to ITU and get away with it
  - False claims of bringing into use
  - Inappropriate use of Cs/ Art. 48
- Cleaning up of the MIFR in an inconsistent manner
  - Creating new practices in an unpredictable and non-transparent manner
  - Targeting easy prey and letting the big fish go
  - Letting networks falsely entered into MIFR before 2012 stay
  - Not removing networks entered into MIFR before 2012 when they no longer are in operation
- WRCs and RRB setting aside the Radio Regulations (and the process of cleaning up of MIFR) in a seemingly random manner on a case-by-case basis
  - Making different decisions in comparable cases

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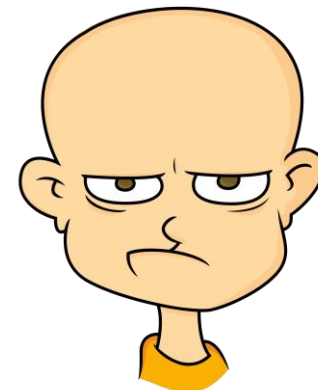
How can ITU retain its authority and respect?

- Practices are established in a predicable and transparent manner

- The procedures are applied consistently and in the same manner to all networks of all administrations, in accordance with the Radio Regulations

- The procedures are seen as reasonable, fair, facilitating and supportive for satellite operators

- It is possible for satellite operators to implement commercial, profitable, satellite networks following the provisions of the Radio Regulations

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Cleaning up MIFR and Lists

Paper satellites

Virtual satellites

Gap filler satellites

Problem, Nuisance or Desirable?

Reaching Further, Bringing You Closer

Paper satellites, Virtual satellites and Gap filler satellites

Paper satellites	Virtual Satellites	Gap filler Satellites

• Submit large amount of filings
  • due to uncertain outcome of coordination
  • for maximum flexibility
  • to block competitors
 	
• Will expire at the regulatory deadline
 	
• New filings of other Administrations have to observe and coordinate with these filings until they expire
	• Claims of having brought into use where in reality:
	  • No satellite exist
	  • Satellite de-orbited/ re-located
	
	• Satellite operates in different frequency band
		• In-orbit satellite brought in which was not originally built for this orbit location/ satellite network
		  • Enable filings to be brought into use
		  • Early start of operation
		  • Launch failure or unforeseen delays in satellite program
		  • No real operation, to unduly extend the regulatory life of filings
		
		• Satellites towards end of life, when replaced in their original location, are often used as "placeholder satellites"
		  • Thriving international market

Overfiling	**No satellite**	**Placeholder satellite**
Following the RR	NOT following the RR	Following the RR May or may not be in line with the intent of ITU and the Radio Regulations

Why do "paper satellites" exist?

- Congestion in the arc:
  - Large number of filings
  - In some frequency bands, the arc is filled with real operational satellites
  - ➤ uncertain outcome of coordination
  - ➤ multiple filings to enhance chance of success for one of the filings
- Commercial value for Administrations to have access to orbit/spectrum resources leads to more filings
- Filings to block coordination of competitors
- No incentive to keep amount of spectrum resources within a filing low

⇨ Overfiling leads to even more overfiling!

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Today's situation

- Some call for measures against overfiling (e.g. limit number of networks in MIFR or priority for countries with few filings)

- Overfiling, in particular together with unreasonable conservative coordination triggers contained in the Radio Regulations, lead to identification of large numbers of coordination requirements for a filing

- It is practically impossible to complete all the required coordination within the 7 (8) years available

- Many filings will not be brought into use and will expire in due time such that coordination for junior networks is not required

- Focus needs to be given to the real and important coordination cases

- Ways to operate are sought through coordination bilaterally and/or directly between satellite operators

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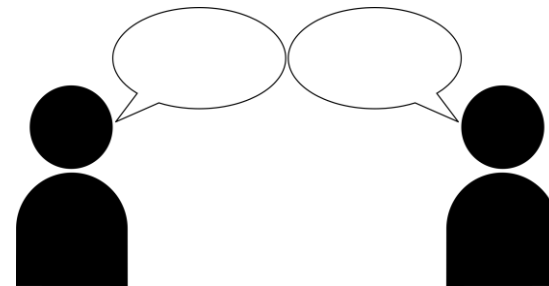
Are "paper satellites" a problem?

- Satellite operators have learned to live with "paper satellites"

- Measures to limit filings or give certain privileges to filings of some administrations;

  - will only address "paper satellites"

  - may constitute obstacles for real, efficient and commercially viable satellite operation

  - may do more damage than good

Are "virtual satellites" a problem?

- Need to claim that filings are brought into use to keep filing rights

- To keep filing rights in locations where:
    - There has never been a satellite of that administration
    - The satellite has been de-orbited or re-located
    - The satellite is in inclined orbit with no real operation
    - The satellite operates in a different frequency band

- To block competitors

- In hope of later usage of filed rights

- Unduly block access to orbit spectrum resources

- Not in line with the "use it or lose it" spirit of the Radio Regulations

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Are "virtual satellites" a problem?

- "Virtual satellites" is an obstacle for introducing real commercial satellite networks

- "Virtual satellites" is a serious threat to ITU's capability to reflect and regulate real satellite usage

- Satellite operators would welcome fair measures applied in a transparent and predictable manner and applied equally to all administrations and satellite networks to counter "virtual satellites"

Are "Gap filler satellites" a problem?

Pros

- Early launch to safeguard against possible launch failure leads to satellites with several years of life left being replaced
- Wasteful to deorbit a satellite with still years of operational life
- Can be used to give an early start of operation in a new location
- Can be used to assist other operators when they have had launch failures or unforeseen delays in their programs
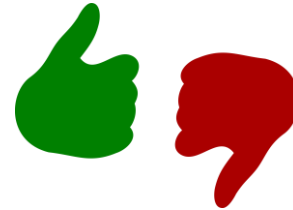
Cons

- Can be used to unduly prolong the life of a filing and warehouse orbit spectrum resources
  - Providing no real service while in the location
  - Staying only for a short period (> 90 days) and then move on ("satellite hopping")
  - No other satellite taking over after the "Gap filler satellite" has been moved away
  - The satellite is in inclined orbit

Are "Gap filler satellites" a problem or are they an efficient and desirable use of in-orbit resources?

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Thank you!

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Reaching Further, Bringing You Closer

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