



Selected Items on Efficient Use of the Spectrum/Orbit Resource

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Topics cover

- Due diligence issues
 - Resolution **49**
 - National due diligence
- Old Assignments in the Master Register
 - Recent ITU-R Circular Letter 301
- “bringing into use” of assignments using on-orbit satellites
- suspension of assignments
- overfiling
- Difference between notified information and capability of satellite



The Radio Regulations

- The Radio Regulations have been written over time by the various WRC's.
- A fundamental concept in the ITU Constitution
Administrations are sovereign in administering the use of frequencies for radiocommunication services on their own territory.
- Observation
Administrations are reluctant to relinquish their sovereign rights and to transfer this right to a third party.
No major changes will be made to the Radio Regulations in the near future. Any imprecision in the Radio Regulations is usually there.



2. Resolution 49 (Rev.WRC-07)

- An administrative Due diligence procedure
 - Identity of the satellite network
 - Spacecraft manufacturer
 - Launch services provider
- First adopted by WRC-97 in response to Res18
- To ensure REAL satellite instead of PAPER satellite to warehouse spectrum



2. Resolution 49 (Rev.WRC-07)

- Difficulty on Implementation
 - Network brought into use, monitoring information shows no satellite
 - Forward looking vs. Backward looking
 - BR produces a file showing the “definitively” with backward looking
<http://www.itu.int/ITU-R/space/snl/listinuse/>
 - Change of satellite, RES49 information may not be the current.



2. Resolution 49 (Rev.WRC-07)

- Improvement Methods
 - Resolution 49 can be further improved. In particular the BR should adopt procedures to update and keep current Resolution 49 information;
 - One way to update the information is suggested below in Section 3.



2.1 National Due Diligence

- Many administration has national due diligence
 - e.g. Hong Kong OFTA requires deposit of HKD400 000 when submit API. No deposit, no submission.
 - Deposit will be refunded if the filing is cancelled or after finished payment for notifications
- Administrations will not adopt stringent national due diligence procedures
 - driving potential satellite operators to set up business in other administrations
 - encourage the development of satellite networks



2.1 National Due Diligence

- Methods for Improvement
 - Stringent national due diligence procedures could help ensure the Res 49 information for “real” network is submitted to the ITU;
 - National regulations should be supportive of the development of satellite networks. Stricter national due diligence procedures would help to make sure only serious filings are submitted such to minimize the number of filings.



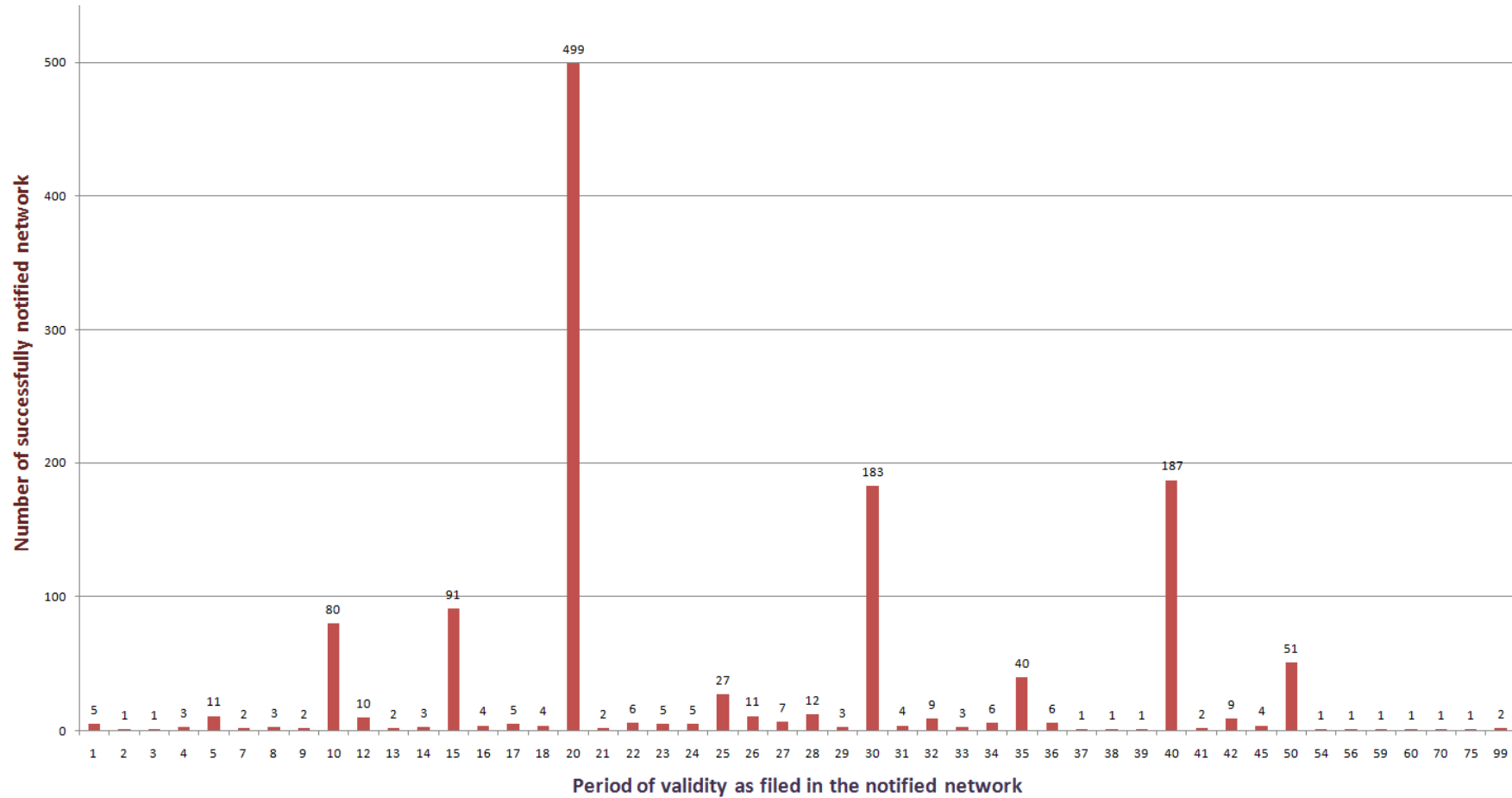
3. Old Assignments in the Master Register

- Time consuming and costly process:
Coordination – Notification – Registration
- No incentive to remove, wait until end of “period of validity”
- Using Res 4 to renew
- Provision No. 11.49
 - “shall” suspension assignment if no longer in use
- Before WRC-2000, first assignment “bring into use”, the remainder of the assignments can also entered “definitively” into the MIFR
- assignments seldom be suspended



3. Old Assignments in the Master Register

- Period of validity for notified networks (search on SRS March2010)





3. Old Assignments in the Master Register

- Methods has been implemented
 - RES49, frequency band has been brought into use

- Methods for Improvement
 - Compare information with monitored information
 - most satellites not at full fill factor
 - at least some activity for a given satellite at a given orbital location



3.1 Recent ITU-R Circular Letter

- On May 1, 2009, the BR issued Circular Letter 301.
"some unused frequency and GSO resources remain recorded in the Master International Frequency Register (MIFR), making it even more difficult to develop new satellite networks and bring them into operation".
- The Letter further requests
"all administrations to review the use of their recorded satellite networks and urges them to remove unused frequency assignments and networks from the Master Register."
- The letter goes on to state
"the Bureau also considers itself bound to have recourse to certain provisions of the Radio Regulations (e.g. No. 13.6), and where appropriate, to enforce the removal of unused frequency assignments from the MIFR when their use has not been suspended in accordance with the Radio Regulations."



3.1 Recent ITU-R Circular Letter

■ **Methods for improvement**

- We would like to see the BR conduct a systematic review of the arc comparing all Resolution **49** information with information obtained from NATO data on existing space objects;
- If satellite corresponding to Resolution **49** information, the BR should ask for additional information.
- If the administration cannot show that there is active satellite, or if the assignments of an earlier satellite no longer operating have not been suspended, then the BR should cancel the filing and RRB. In order to insure that only questionable filings are cancelled, the RRB should confirm such cancellations.



4. Bringing into Use of Assignments Using On-Orbit Satellites

- Three questions:
 - a, Can any on-orbit satellite be used?
 - b, To what extent should the technical characteristics of such a satellite reflect the filed characteristics of the network whose assignments are being brought into use?
 - c, How long should the satellite be left in location?
- RRB decision in mid-1990 answer a, and b,
 - a case between networks at 29E and 28.2E
 - RRB recommended that "date of bringing into use" (as defined in AP4) to be revised by WRC-2000
 - The word "regular" is added in front "operation"
 - "within the technical characteristics notified to the Bureau"



4. Bringing into Use of Assignments Using On-Orbit Satellites

■ **Methods for improvement**

- With respect to question c) the only guidance given by the Radio Regulations is that assignments no longer in use shall be suspended;
- “bring into use” assignments of filings at more than one location using one satellite. Such use has not yet been challenged but would likely not be accepted by the RRB if a case were brought before them.



5. Suspension of Assignments

- RR No. **11.49** states that frequency assignment “shall” (i.e. must) be suspended if they are no longer in use.
- virtually no satellite operator suspends assignments “no longer in use” since this starts the 2 years clock on itself, if it cannot bring back to use within 2 years, it will lost the filing.
- Administrations usually only suspend a network if they are challenged by another administration.



5. Suspension of Assignments

■ **Methods for improvement**

- Encourage a stricter application of Circular Letter 301;
- Such an application would force many administrations to suspend assignments as the BR queries administrations under No. **13.6** in the course of examining Resolution **49** information.
- The Special Committee should investigate some method to enforce the “shall” in No. **11.49**.

For example, if a satellite is moved out of an orbital location and the assignments implemented by that satellite are no longer in use and if the assignments are not suspended within, say, 30 days, then the underlying network is deleted. In other words, once the 30-day period has expired and if the administration responsible for the network has not suspended the relevant frequency assignments, then the underlying network(s) is deleted. This would force administrations to suspend assignments no longer in use or have the underlying network(s) deleted.



6. Overfiling of Satellite Networks

- caused by the uncertainty of the coordination process that makes it difficult to predict the outcome of the frequency coordination
- the large satellite operators have learned to live with the overfiling and they have the financial means to submit many filings in anticipation of developing new orbit/spectrum resources
- modification/addition to the BSS Plan , only 15 + 15 years. all implemented networks fall into this category
- at WRC-07, an effort from the developing countries to rescind the extension of filing of ITU-R Res 4



6. Overfiling of Satellite Networks

■ **Methods for improvement**

- the cost recovery fee for filing an API should be increased in order to discourage the filing of many orbital locations;
- Alternatively, the API process could be eliminated with the Coordination Request being the first filing submitted;
- Administrations must find a way to accommodate new satellite networks from countries without a national satellite operator.



7. Difference between notified information and capability of satellite

- Most coordination requests file a steerable beam
- Very few satellites implement steerable beams.
- **Method for improvement**
 - Only the area that can be served should be notified.



THANK YOU !