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# Efficient Use of Spectrum/Orbit

- **Efficient use of the spectrum/orbit resource is one of the most crucial challenges facing the international community in efforts to promote worldwide telecommunication development.**
- **Special attention was devoted to this issue at the last ITU Plenipotentiary Conference (Antalya, 2006) and WRC-07(Geneva, 2007).**
- **COPUOS and its STS & LS**

# Efficient Use of Spectrum/Orbit

- In particular, administrations, satellite operators and industry are invited to be forward-looking in seeking ways to improve:
- the ***regulatory procedures governing access to orbit and frequencies*** in order to reflect the latest technologies (RES-86 (Rev.WRC-07)),
- develop concepts that enhance the ***international spectrum regulatory framework*** of the Radio Regulations to meet the demands of current, emerging and future radio applications (RES-951 (Rev.WRC-07)).

# Efficient Use of Spectrum/Orbit

- The ITU Radiocommunication Sector is also invited ***to carry out studies on procedures for the measurement and analysis of the application of the basic principle contained in Article 44 of the ITU Constitution (Resolution 80 (Rev.WRC-07)).***

*GSO, are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of the Radio Regulations, so that countries or groups of countries may have equitable access to those orbits and frequencies, taking into account the special needs of the developing countries and the geographical situation of particular countries.*

- Furthermore, **studies on the efficient use of spectrum/orbit resource** are requested in Questions ITU-R 83-5/8 and 274/4

# Efficient Use of Spectrum/Orbit

- **This BR workshop, the first such one ever organized by the ITU Radiocommunication Bureau, showed that it might now be time to openly discuss issues often qualified as “sensitive” and hopefully make progress in adapting and improving the international satellite registration regulatory framework at the next WRC-11.**

# Efficient Use of Spectrum/Orbit

- Indeed, the use of space radiocommunication services has progressed considerably over the years and, as a consequence, in recent years it has become increasingly difficult for administrations to obtain suitable new GSO positions and frequencies and fully coordinate them in application of the relevant provisions of the Radio Regulations.
- Orbit scarcity is not a “paper satellite” issue only, and real overload of GSO positions does occur today in some parts of the orbit, coverage and frequency bands.
- ***Efficient use of the spectrum/orbit resource is one of the most crucial challenges facing the international community in efforts to promote worldwide telecommunication development and achieve the connectivity access targets set by the WSIS.***

# Efficient Use of Spectrum/Orbit

- The challenge for ITU, and for administrations and the satellite community, is to be able to continue carrying out its vital work of recording frequency assignments in the Master Register, thereby ensuring that frequencies and orbital positions associated with those assignments are compatible and do not result in interference.
- The questions behind this challenge and put forward for the BR Workshop were:
  - Do ITU and the Radio Regulations, through the existing procedures for the registration of frequency assignments for space services, bring added value to administrations and the satellite community?
  - What mechanisms and practical strategies can be employed to ensure efficient use of the spectrum/orbit resource and improve the existing international satellite spectrum management systems?

# Efficient Use of Spectrum/Orbit

- More as 160 delegates and observers participated on this BR workshop.
- Sixteen presentations from administrations accessing the space technology (USA, RUS, CHN, F, B, CLM, MLA, NOR, SUI) but also big operators from Intelsat, SES New Skies, Asiasat and satellite consultants were made and discussed thoroughly in the course of four sessions
  - GENERAL PRINCIPLES
  - TECHNICAL OPTIONS
  - REGULATORY OPTIONS
  - CASE STUDY
- All discussions focused on the trade-offs between technical, operational, regulatory and economic efficiency for the effective use of the spectrum/orbit resource.



# Efficient Use of Spectrum/Orbit

- During the final roundtable, all participants recognized that to rise to the above challenges will require the combined efforts of all members of ITU.
- Thus far, there have been few forums in which all those with an interest in the effective and efficient use of the spectrum/orbit resource can get together to discuss the issue.
- There was consensus that the international regulatory framework for registering satellite networks must be improved, and that the improved framework be operative or ready to be operative by the next WRC-11 if ITU is to maintain its credibility and to remain fully relevant to the satellite community.
- A suggestion-oriented summary of the main issues debated during the sessions may be found at:  
<http://groups.itu.int/br-ssd>



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<http://groups.itu.int/br-ssd>

**Thank you very much  
for your attention and you are welcome  
to have any inputs to this Forum**