CHAPTER 12

The ITU Radio Regulations Related to Small Satellites

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I Introduction

The rights and obligations of the member states of the International Telecommunication Union (ITU) in the domain of international frequency management of the spectrum/orbit resource are incorporated in the Constitution and Convention of the ITU1 and in the Radio Regulations2 that complement them. These instruments contain the main principles and lay down the specific rules governing the frequency spectrum allocation to different categories of radiocommunication services and the rights and obligations of member administrations3 in obtaining access to the spectrum/orbit resource. Furthermore, they provide the framework for the international recognition of these rights by recording frequency assignments and, as appropriate, any associated orbits, including the geostationary-satellite orbits (GSO) used or intended to be used in the Master International Frequency Register (MIFR).

The frequency management is based on the main principles of efficient use of and equitable access to the spectrum/orbit resource as laid down in the ITU Constitution (Article 44).4 Further detailed regulations and proce-
dures governing spectrum/orbit use are contained in the Radio Regulations, which is another binding international treaty.5

Specific procedures have been established to ensure international recognition of the frequencies used and to safeguard the rights of administrations when they comply with those procedures. The fact that the ITU Constitution and Convention as well as the Radio Regulations are intergovernmental treaties ratified by governments means that those governments undertake (1) to apply the provisions in their countries, and (2) to adopt adequate national legislation that includes, as the basic minimum, the essential provisions of these treaties.

The international Radio Regulations are, however, oriented mainly towards matters of a global or regional character, and in many areas there is scope for making special arrangements on a bilateral or multilateral basis.

As regards the ITU regulatory framework for small satellites, it has to be pointed out that there is no definition for small satellites in the Radio Regulations. They distinguish only between geostationary (GSO) and non-GSO satellites. This contribution will concentrate on the allocation of frequency bands to non-GSO satellites and to specific radiocommunication services as described in Article 5 of the Radio Regulations. Sharing and protection as well as criteria for different non-GSO satellite services are contained in various ITU-R Recommendations.6 These recommendations are results of studies by the ITU-R Study Groups7 related to interference and sharing between different radiocommunication systems and services.

With regard to small satellites (in particular nano- and picosatellites), the World Radiocommunication Conference of 2012 (WRC-12) has recognised the need to review the existing regulatory framework and has requested the ITU-R Study Group to carry out a study and report for the World Radiocommunication Conference in 2015 (WRC-15).


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'.

5 See Art 4 No 31 ITU Constitution.