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Trading With Space Resources: the Forces of Privatization and Commercialization applied to Satellite Telecommunications Through ITU and WTO

by

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Abstract

Outer Space no longer represents a quiet mean where governments place their satellites in order to cover the communications needs of their people. Technological developments and the increase of economic benefits deriving from telecommunications have caused the proliferation of megacarriers located on a world-wide basis and the treatment of telecommunications as a business product. In this scenario, the International Telecommunication Union and the World Trade Organization separately rule the development of telecommunications via satellite, affecting national regulations and, at the same time, the evolvement of the pattern in commercial relations among the companies who develop satellite telecommunications in outer space. This thesis illustrates the state of the liberalization of telecommunications and the main national obstacles for its achievement. This study thoroughly analyzes the functioning of the two leader organizations, ITU and WTO, and the regulations that they are enacting. Additionally, the thesis analyzes the most practical and new problems that influence their structure, such as the new technological developments, the role of national regulations of some countries, and the privatization of intergovernmental organizations. Moreover, the thesis examines the increase in the demand of space resources and the introduction of market mechanisms to the attribution of orbital slots and frequencies, due to the increase of private actors, and concludes with the proposal of possible models of cooperation between the two leader organizations, ITU and WTO, in order to rationally and efficiently deal with ruling telecommunications.

Résumé

L'espace extra atmosphérique n'est plus un milieu pacifique où les gouvernements peuvent, sans contrainte, placer en orbite leurs satellites pour assurer les besoins de communication de leur peuple. Les développements technologiques et l'augmentation des bénéfices économiques provenant des télécommunications par satellite ont occasionné la multiplication des transporteurs œuvrant à l'échelle internationale et le traitement des télécommunications comme un produit de commerce. C'est dans ce cadre que l'Union Internationale des Télécommunications (UIT) et l'Organisation Mondiale du Commerce (OMC) contrôlent parallèlement le développement des télécommunications par satellite et leur réglementation à l'échelle nationale ainsi que l'évolution des relations commerciales entre les compagnies offrant des services de communication par satellite.

Ce mémoire illustre l'état de la libéralisation des télécommunications et les principaux obstacles nationaux à cette libéralisation. Il analyse donc en profondeur le fonctionnement et la réglementation de l'UIT et de l'OMC. Il aborde ensuite les nouveaux problèmes d'ordre pratique qui influencent la structure de ces organisations, comme par exemple les développements technologiques, les réglementations nationales de certains pays et la privatisation des organisations intergouvernementales. De plus, ce mémoire examine la croissance de la demande des ressources spatiales et l'introduction des instruments commerciaux dans l'attribution des orbites et des fréquences, rendue nécessaire par l'augmentation du nombre des transporteurs privés. Finalement, des modèles de coopération entre l'UIT et l'OMC sont proposés afin de permettre la réglementation rationnelle et efficace des télécommunications.

Introduction

Fifty years ago, outer space was just the scenario for science fiction films and dreams of politicians and scientists with crazy ambitions. Although, of course, this perspective persists, today other outer space applications instigate the investment of millions of companies: satellite telecommunications. Since 1967, a group of treaties, under the auspices of the United Nations, introduced the first applicable principles to outer space. The main treaty, the Outer Space Treaty,[1] declared outer space resources as the "province of mankind," not allowed for appropriation by any country. These principles are applicable to all activities in outer space and therefore, to space telecommunications and space resources, such as orbits and frequencies.

However, this group of principles of public international law was thought of for a moment when space activities were in a primitive stage and did not envision the potential boom of commercial activities that would eventually take place in outer space some years later. Therefore, although the original framework for these activities was public international law, the evolution of commercial activities in outer space called for the application of economic law, the participation of economic institutions, such as the World Trade Organization [hereinafter WTO], and, in this context, the reformulation of international relations.

Before the 1980s, satellite communications were dominated by intergovernmental cooperative ventures, mainly among monopolies or dominant national public carriers. This situation has dramatically changed with the rapidly increasing privatization of these national carriers and the opening of telecommunications to free competition, both local and international.

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[1] *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies*, 27 January 1967, 610 U.N.T.S. 205 18 U.S.T. 2410, T.I.A.S. No. 6347 (entered into force 10 October 1967).

The globalization of telecommunications has shown a number of shortcomings and a lack of clarity concerning the role of the institutions dealing with international telecommunications.

A fundamental change has operated in international relations. With the previous nation-state system, national telecommunications were under the control of the body designated by the government, and the State participation on international organizations was determined by this same principle of sovereignty. Currently, private actors exercise many previous State functions.

Indeed, a proliferation of actors demanding frequencies and orbital positions from the International Telecommunication Union [hereinafter ITU] has occurred. According to some military space officials, "commercial operators, in their quest to capitalize quickly on space, do not perceive near-term threats to orbiting spacecraft."[2] In recent declarations by Gen. Richard B. Myers, commander-in-chef of U.S. Space Command, commercial operators have a tendency to think that "space is a peaceful medium - an international sanctuary for generating revenue ... Indeed, industry assumes the multinational aspect of space provides its own protection- a sort of 'virtual neutrality.'"[3]

This "virtual neutrality" does not exist anymore since so many participants are trying to get a part of these revenues. This thesis will analyze the intersection of two different issues

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[2] W.B. Scott, "Space Chief Warns of Threats To U.S. Commercial Satellites" *Aviation Week & Space Technology* 150:15 (12 April 1999) 51.

[3] *Ibid.* Commercial operators act without taking into account certain risks, such as increasing disputes over orbital and frequency resources and the threat of "cyberwar" or a war of information that could take place. A recommendation is made to satellite companies: to harden their satellites to radio-frequency interferences, or at least, to put a sensor in order to detect in advance a possible interference. Another measure would be the addition of maneuvering capability to the satellite. Actually, the U.S. Air Force Research Laboratory's Space Vehicles Directorate is developing a new technology to detect intentional radio frequency and laser interferences. This new system would consist of a sensor on board the satellite which will identify the interference and report immediately to the operator. These instruments are generally called satellite threat warning systems. See W.B. Scott, "New Satellite Sensors Will Detect RF, Laser Attacks" *Aviation Week & Space Technology* 151:5 (2 August 1999) 57-58.

caused by this traditional freedom in outer space. First, not all commercial operators can act freely in outer space without competing for the resources. The increase of demands calls for a modification of the ITU's traditional instruments, an organization previously holding only a technical role. New mechanisms are necessary to control problems, such as the "paper satellites" or the assignation of frequencies to non-geostationary orbit services. The ITU needs some changes to control these problems in international telecommunications.

Second, the commercialization of outer space has implied the application of trade principles to these activities through the WTO mechanisms. The question for the future is to what degree can this commercialization affect. Can the ITU be privatized? Or could orbital slots and frequencies be traded among companies in order to act in one or other territory?

This thesis will discuss the current trends that are affecting international satellite telecommunications. For that purpose, the globalization of space activities and the privatization of operators will be presented in conjunction with the current state of the two organizations that deal with these phenomena: ITU and WTO.

Chapter One presents the technical basis for an understanding of the complex world of satellite telecommunications. The functioning of a satellite network in outer space and its use of the radio frequency spectrum to communicate with earth are essential to the reader in order to comprehend the terms and the content of the thesis. Moreover, the document will present an analysis of space globalization. Privatization of space activities and their shift of conception to tradeable services will then be illustrated.

Chapter Two discusses the international organizations that rule telecommunications. First, the emergence of the WTO will be examined while thoroughly exploring the General Agreement on Trade in Services, whose provisions are applicable to telecommunications services since 1998, thanks to the Agreement on the liberalization of basic telecommunication services.

Then, Chapter Two will present the evolution of the historical ITU and its re-structure these last years in order to keep its position in the international sphere.

Chapter Three's goal is to describe one of the main problems that affect the ITU at the moment, that is, the orbital congestion caused by the incredible expansion of telecommunications and the linked emergence of private companies asking for space resources. This chapter will further show the obsolescence of this organization procedures concerning the attribution of orbital positions and frequencies and the last years' efforts in order to introduce some rationalization and moreover, to avoid losing international authority.

Finally, Chapter Four analyzes the most important part of this study, the WTO regulations and their implications for telecommunications. Different national approaches to the Agreement will be discussed. Indeed, the intersection between this organization and the ITU will be presented as a potential model of cooperation for the future. Finally, Chapter Four concludes by presenting the enormous importance that national barriers still have in current cases that presented problems to the WTO in the negotiations of the mentioned agreement. Indeed, Chapter Four will demonstrate how certain States are ruling the degree of liberalization on telecommunications besides both the WTO and the ITU.

Chapter One- The Basis for the Understanding: Globalization and Privatization of Telecommunications

It has become fashionable to discuss about 'globalization' and 'privatization' of telecommunications. Subsequently, before starting an analysis on satellite telecommunications it is essential to describe what these phenomena mean and how they have developed. Traditional systems of telecommunications using the below explained geostationary orbit are still the safest and the most used. However, technological developments and lessening of national barriers have encouraged private companies to trying to do what before was only reserved to intergovernmental organizations: offering global communications. The understanding of the enormous number of companies trying to develop these services at the moment and the technology they are trying to use is unavoidable.

The second important phenomenon concerns the commercialization and privatization of space activities, which will make telecommunications be treated as an object of trade. Moreover, the privatization tendencies are so broad that are affecting even traditional public international organizations.

A. Technical Presentation: How do Space Telecommunications Operate?

As a note of clarification, it is important to remind that this study establishes a picture of the regulation of international satellite telecommunications and their implications for national regulators and regulations. Therefore, other systems of telecommunications, such as cable systems (e.g. optical fiber, coaxial cable) will not be studied. However, they cannot be

underestimated since they are as important as the satellite, coexisting both in concurrence in the main part of cases.

1. Main Elements of a Satellite System

Basically, a satellite communication system contains two main elements: the satellite and the earth station.[4] They are commonly defined, respectively, as the space segment and the earth or ground segment.[5] The space segment is composed of the satellite and all the equipment intended for the good functioning of the satellite, that is, the tracking, telemetry, and command [hereinafter TTC] systems, which usually exist in the ground station. Indeed, the most important component in the space segment is the satellite. A satellite is a space engine[6] placed into an orbit and is usually distinguished by the payload and the platform, the latter being just the structure that supports the communication system.[7]

Although there are other applications,[8] the most familiar use of satellites due to the global need to be connected are the telecommunication satellites. Communication and broadcast

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[4] M.L. Smith III, "The Orbit/spectrum Resource and the Technology of Satellite Telecommunications: An Overview" (1987) 12 Rutgers Computer & Tech. L. J. 285 at 293.

[5] E. Sartorius, "Stations terriennes de télécommunications" (1982) no. 206-207 Supplement aux Cahiers Français, La Documentation française 51.

[6] The ITU Radio Regulations [hereinafter RRs] make all references not to *satellite*, but to *space station*. Article S1.64 defines *space station* as "a *station* located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere." ITU, *Radio Regulations*, Radiocommunications Bureau, adopted by the World Radiocommunication Conference (Geneva, 1995) (WRC-95), revised by the WRC-97, (8th ed., Geneva, 1998, ISBN 92-61-07637-8).

[7] See G. Lebègue, "Un satellite de télécom: à quoi ça sert, comment ça marche, combien ça coûte?" (1994) 2 Nouvelle Revue d'Aéronautique et d'Astronautique 51.

[8] R. Bender, *Launching and Operating Satellites: Legal Issues*, Utrecht Studies in Air and Space Law, vol. 18 (The Hague: Martinus Nijhoff Publishers, 1998) at 14ff. Other satellite applications that are not the object of this study are: remote sensing, that is, the observation of the earth for the accumulation of data

satellites represent the space activities which report more economic benefits and, therefore, is where the investors increase through the years.

On the other hand, with respect to the ground segment, the ground station comprises of the emission and reception antennae and all the radioelectric instruments necessary to communicate with the satellite. The ground station links the satellite for the transmission of signals and controls its orbital life.[9]

The essential means for all sorts of space communications is the orbit/spectrum resource, that is, the orbit in which the satellite is placed and the radio frequency spectrum. The radio frequency spectrum is necessary for the transmission of signals to and from the satellite (the "up-linking" and the "down-linking," respectively) and for complying with the TTC functions from the earth station.[10]

2. Types of Communication Satellites

The ITU establishes the following category of communications satellites.[11] First, Fixed Service Satellites [hereinafter FSS] are able to provide point-to-point communications for voice

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with different purposes, such as weather prediction, detection of minerals in remote locations, and strategic and military surveillance purposes; global navigation for aircraft and vessels; or even space exploration, for the advancement of the science.

[9] *Ibid.* at 18.

[10] S.D. White, "International Regulation of the Radio Frequency Spectrum and Orbital Positions" (1995) 2 Telecom. & Sp. J. 329 at 330.

[11] H.E. Hudson, *Global Connections, International Telecommunications Infrastructure and Policy* (New York: Van Nostrand Reinhold, 1997) at 373ff. See also L. Blonstein, *Communications Satellites: The Technology of Space Communications* (London: Heinemann, 1987) at 73ff.

and data, and point-to-point distribution of radio and television signals.[12] Second, Broadcasting Service Satellites [hereinafter BSS] are traditionally satellites used for the transmission of television signals directly to households, or to any number of stations located in the area of coverage of the satellite.[13] Third, Mobile Service Satellites [hereinafter MSS] provide voice and data communications between fixed stations and mobile users in ships, planes and other vehicles. MSS includes all communications with handheld receivers.[14]

However, these classifications are currently not completely black and white due to the technological advances and crossovers. For instance, there is a new service called "Direct-To-Home" (DTH) which provides direct transmission to private houses using FSS frequencies. MSS introduce another important example of this confusion of classifications when they are supplying personal communications to particular handsets.

Indeed, the convergence of technologies is altering some traditional regulatory distinctions which were based on this classification among FSS, BSS and MSS. The clearest phenomenon is the removal of boundaries between FSS and BSS satellites, that is, between services directed to the general public and those directed to particular points.[15] An example of this convergence over the last few years is the appearance of a new type of satellite, specifically,

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[12] Art. S1.21 RRs, *Fixed-satellite service* is "a *radiocommunication service* between *earth stations* at given positions, when one or more *satellites* are used; the given position may be a specified fixed point or any fixed point within specified areas ..." RRs, *supra* note 6.

[13] *Ibid.* Art. S1.39 RRs, *Broadcasting-satellite service* is "a *radiocommunication service* in which signals transmitted or retransmitted by *space stations* are intended for direct reception by the general public."

[14] *Ibid.* Art. S1.25 RRs, *Mobile-satellite service* is "a *radiocommunication service*:

- between *mobile earth stations* and one or more *space stations*, or between *space stations* used by this service; or
- between *mobile earth stations* by means of one or more *space stations*."

[15] M. Hoskova, "Convergence of Telecommunication Technologies – Some Legal Aspects" (1990) Proceedings of the Thirty-third Colloquium of the Law of Outer Space, IISL 215.

a hybrid satellite which transmits to earth stations and, at the same time, to particular parabolic antennae.[16]

3. Satellite orbits: the Geostationary Satellite Orbit

There are several orbits from where a satellite system can operate. In this sense, the geostationary orbit [hereinafter the GSO][17] is the most frequented orbit because of several advantages. In this sense, the GSO is situated above the equator at an altitude of approximately 36,000 km (22,300 miles) from the earth. In this orbit, the satellite revolves at the same rate as the earth and remains stationary with respect to the earth.[18] This characteristic has always been a tremendous advantage for communications because of the ease it provides for the connection with the earth station.

Regarding other advantages usually promulgated from this orbit, it is important to mention the fact that only three satellites are necessary to cover the whole planet from the GSO. Each of them can broadcast permanently to about 33%-40% of the earth.[19] This is due to this orbit's distance from earth and the advantage of remaining stationary above a fixed point over the globe. Other orbits do not have this particular advantage. For a better understanding, the closer to earth the orbit is, the more satellites the system requires in order to cover the world because the satellite only remains in contact with a particular area for a short period of time.

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[16] P. Aquilleas, *La télévision par satellite. Aspects juridiques internationaux*. Centre de droit international de Paris I, 2nd. Ed. (Paris: Montchrestien, 1997) at 28.

[17] For a wide study about the geostationary orbit, its characteristics, and regulation, see Dr. R.S. Jakhu, *Legal Regime of the Geostationary Orbit* (D.C.L. Thesis, Institute of Air and Space Law, McGill University 1983) [unpublished].

[18] M.L. Smith III, *supra* note 4 at 286ff.

[19] R. Bender, *supra* note 8 at 21.

On the other hand, geostationary satellites [hereinafter GSO satellites] are less expensive than other orbits' systems. This is due to several reasons. First, the system needs fewer satellites to be operational. Second, earth stations are less expensive than those used in MSS systems, because the latter need more complicated tracking systems.[20] Additionally, GSO satellites have a more prolonged operational life in orbit, mainly because they do not have to cross the Van Allen radiation belt in every orbit.[21]

Usual objections[22] to the GSO are the propagation delay, that is, the waves arrive after a while to earth, because of the greater distance from earth, and the lack of global coverage at far northern and southern latitudes. Indeed, according to some authors, GSO satellites are not easily serviced. The only spacecraft able to service satellites and come back to the earth at the moment is the space shuttle and it is not capable of arriving to the GSO.[23]

With this situation, satellite communications began using other orbits several years ago. Lower orbits are, for example, accessible with a space vehicle such as the space shuttle. The most

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[20] Smith III, *supra* note 4 at 287.

[21] R.S. Jakhu, *supra* note 17 at 13. This is the case of the USSR satellite series Molniya. These satellites use an elliptical orbit in order to cover northern territories of the country. To operate on this orbit, satellites have to cross the Van Allen line several times a day and this reduces the life period of the satellite.

[22] W. Pritchard. "Satellites in non-geostationary orbits: Coming technical and policy issues of the 1990s" (1993) Sp. Pol'y 199 at 200.

[23] R. Bender, *supra* note 8 at 21.

important are the Low and Medium Earth Orbits[24] [hereinafter LEO and MEO respectively]. Three different systems exist within these two orbits:[25]

- Little LEO systems use small satellites which are intended to offer mobile data services and messaging services (e.g. fax, paging and electronic mail). These systems operate in frequencies below 1 GHz and are capable of transmitting only data.[26]

- Big LEO systems employ bigger, heavier, and more powerful satellites, using frequencies above 1 GHz.[27] They may provide real-time voice, communications with mobile (small handsets) or fixed terminals. The existing telecommunications systems of Iridium or Globalstar fall under this category.

- MEO systems offer the same kind of services as the Big LEO systems but the satellites are placed in a higher orbit (e.g. ICO and Odyssey), which implies the need of less satellites.

These systems work through a constellation of satellites. The technological difference of these systems with the GSO systems is that to provide a worldwide telecommunications network, the network needs many satellites to ensure a permanent connection between any point in the world and a satellite. On the other hand, these closer orbits have the advantage that the telecommunications system will need less powerful terminals, giving thus the possibility of access by small handsets, which improves the comfort of particular users.

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[24] The Low Earth Orbit (LEO) occupies a range of orbital positions between 700km-1.500km and the Medium Earth Orbit (MEO) is at an altitude around 10.000km; ITU. *Fact Sheet* (1996) ITU Informative Document, 1st World Telecommunication Policy Forum, Geneva 21-23 October 1996, online: ITU <http://www.itu.int/pforum/fact-e.htm>.

[25] See S. Le Goueff, "Licensing Global Mobile Personal Communications by Satellite: the Quest for the Holy Grail?" (1997) 4 Telecom. & Sp. J. 257.

[26] J.P. Schulz, "Little LEOs and Their Launchers" (1995) 3 CommLaw Conspectus 185 at 186.

4. The Radio Frequency Spectrum

The Radio Spectrum is the name given to the frequencies, between zero and 3,000 gigahertz (GHz),[28] which electronic devices transmit to and from the satellite.[29] Due to the physical characteristics of the radio waves, only certain bands of frequencies are suitable for the transmission of information.[30]

Particularly, to understand how the system works, it is important to distinguish three processes: allocation, allotment, and assignment.[31] First, the ITU *allocates* particular bands of

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[27] *Ibid.* at 186.

[28] Art. S1.5 RRs define *radio waves* or *hertzian waves* as "electromagnetic waves of frequencies arbitrarily lower than 3 000 GHz, propagated in space without artificial guide." A gigahertz (GHz) is 1,000,000,000 hertz. A Hertz (Hz) is the unit of frequency, that is, cycles per second. 1 kilohertz (KHz) is 1,000 Hz. And 1 Megahertz (1 MHz) is 1,000,000 Hz. RRs, *supra* note 6. See L. Blonstein, *supra* note 11 at 73.

[29] See e.g. Bender, *supra* note 8 at 18ff.

[30] L. Blonstein, *supra* note 28. These are the frequency bands that are used in communications via satellite:

Frequency Range	**Band Name**
1 - 2 GHz	L-Band
2 - 3 GHz	S-Band
4 - 6 GHz	C-Band
7 - 8 GHz	X-Band
11 - 18 GHz	Ku-Band
20 - 30 GHz	Ka-Band

Art. S2.1 RRs divides the entire radio frequency spectrum into the following bands:

- very low frequencies (VLF): from 3 to 30 KHz,
- low frequencies (LF): from 30 to 300 KHz,
- medium frequencies (MF): from 300 to 3,000 KHz,
- high frequencies (HF): from 3 to 30 MHz,
- very high frequencies (VHF): from 30 to 300 MHz,
- ultra high frequencies (UHF): from 300 to 3,000 MHz,
- super high frequencies (SHF): from 3 to 30 Ghz,
- extremely high frequencies (EHF): from 30 to 300 GHz, and
- decimillimetric waves: from 300 to 3,000 GHz.

See R.S. Jakhu, *supra* note 17 at 5; see also D.M. Leive, *International Telecommunications and International Law: the Regulation of the Radio Spectrum* (Leyden: Oceana Publications Inc., 1970) at 358ff.

frequencies to certain services, depending on whether the service is fixed, broadcasting, or mobile. The frequencies are allocated by pairs, being one for the up-link connection, that is, from the earth station to the satellite, and the other frequency for the down-link connection. This allocation of frequencies by pairs is necessary to avoid harmful interferences when the satellite is sending and receiving signals at the same time. The satellite cannot use the same frequencies in the two directions.[32] Moreover, allocations can sustain many different distinctions. For instance, frequencies may be allocated to just a service, to two services with equal rights, or to two services on a primary and a secondary basis. At the end, the allocations are registered in the Table of Frequency Allocations.[33]

Another different stage is the *allotment*.[34] The ITU *allots* these bands of frequencies to different countries within three regions, according to the following ITU allocations, reproduced in Figure 1: Region 1 comprises of Europe, Africa, and the U.S.S.R. and Mongolia; Region 2 is formed by the entire American continent ('the Americas'); and Region 3 includes Asia and the Pacific (Australia, New Zealand, and the Oceanic continent).[35]

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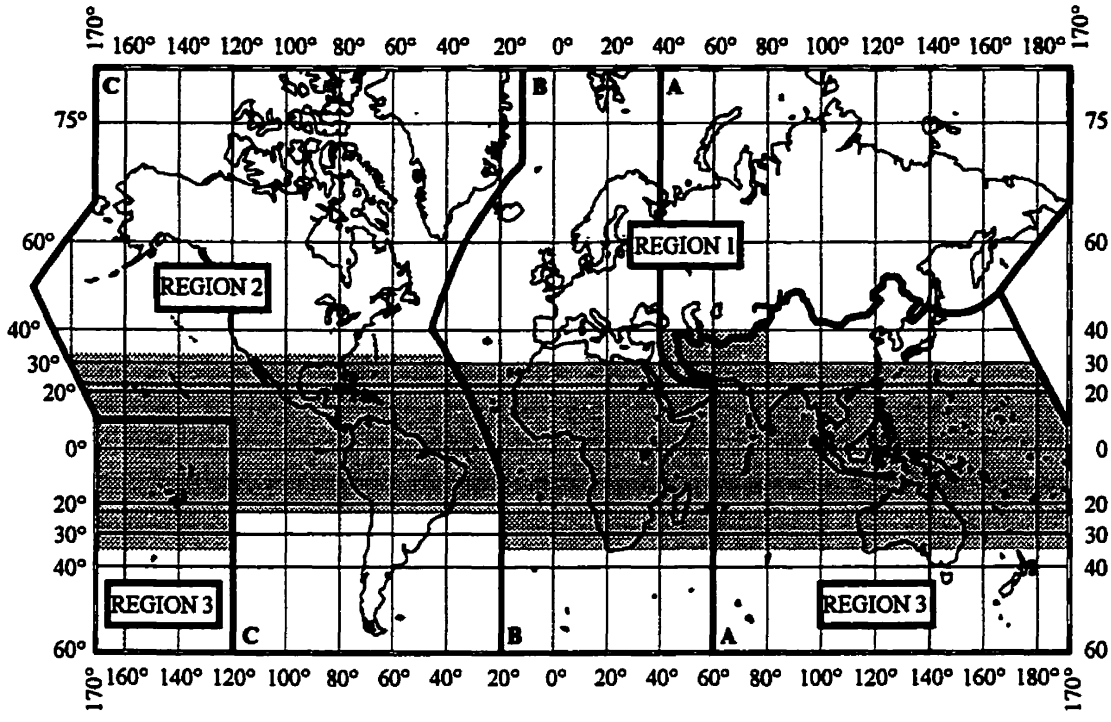
[31] Art. S5 RRs, *Frequency Allocation, supra* note 6; see also D.M. Leive, *ibid.* at 19ff.

[32] R. Jakhu, *supra* note 17 at 6.

[33] The Radio Regulations define *allocation* of a frequency band as the "entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space *radiocommunication services* or the *radio astronomy service* under specified conditions." RRs, *supra* note 6 Vol. 1, Chapter S1.16.

[34] The RRs define *allotment* of a radio frequency or radio frequency channel as the "entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space *radiocommunication service* in one or more identified countries or geographical areas and under specified conditions." *Ibid.* Art. S1.17.

[35] J.M. Smits, *Legal Aspects of Implementing International Telecommunication Links: Institutions, Regulations, and Instruments*, Utrecht Studies in Air and Space Law (The Netherlands: Martinus Nijhoff Publishers, 1991) at 68.



The shaded part represents the Tropical Zones as defined in Nos. S5.16 to S5.20 and S5.21.

S5-01

Figure 1: map extracted from the ITU Radio Regulations, Article S5.2, *Frequency allocations, Regions and Areas* (see *supra* note 6).

Finally, within these regions, the countries *assign* the frequencies to particular stations in accordance with the ITU allotment plans.[36] If the allocation is an international process by nature, the assignment is a national process. Each country possesses the sovereign right to designate or *assign* a particular frequency to a station. The country will notify this frequency assignment to the ITU, and the organization will check if this assignment is in conformity with the ITU allocations, allotments, and international rules. If the process of examination is favorable to the country, the ITU will register this assignment in the *Master International Frequency Register*.[37]

[36] Finally, the definition of assignment of a radio frequency or radio frequency channel by the RRs is the "authorization given by an administration for a radio *station* to use a radio frequency or radio frequency channel under specified conditions." *Ibid.* Art. S.18.

[37] D.M. Leive, *supra* note 30 at 20. The author refers to these two processes of allocation and assignment as "legislative" and "regulatory" stages. The allocation is similar to a legislative process because is like a

5. Satellite Constellations

A relevant phenomenon in the current stage of telecommunications is the appearance of a certain amount of systems providing mobile satellite communications, many of them operating from LEO, and others from the traditional GSO, both of the technologies described above. A current issue concerns the legal problems that these constellations introduce such as the uncertain future occasioned by the filing for bankruptcy of Iridium LLC, the most advanced system of all, and later on, of ICO Global Communications. Iridium was the first system to start its operations after launching all of its 66 satellites into LEO, at 485 miles (780 Km). With Motorola Space and Systems Technology, Inc. as its principal investors, this American company introduced commercial services on November 1, 1998. Until now, Iridium was the only one offering effective services.

After some difficult months, Iridium filed for bankruptcy under Chapter 11 of the U.S. Bankruptcy Code on August 13, 1999. This was basically due to the lack of sufficient subscribers and revenues necessary to pay the huge debts the company owed, and the termination of cash flow from Motorola.[38] Iridium will continue offering its services while it tries to restructure its

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dividing a natural resource into different categories, but the ITU does not allocate the final frequencies. The assignment has a regulatory nature, comparable, according to Leive, to the filing of claims by particular users with an administrative agency. The final allocations are the consequence of international compromises between the particular users in the World Administrative Conferences.

[38] J.C. Anselmo, "Iridium Races Against Bankruptcy Deadline" *Aviation Week & Space Technology* 151:6 (9 August 1999) 33. See *also*, I. Jonas, "Stocks Fall in Satellite Phone Companies" *Reuters* (13 August 1999), available in Listserver: University of North Dakota Space Forum.; J. Schwartz, "Iridium Files for Chapter 11: Phone System To Keep Working" *Washington Post* (14 August 1999) E01. Iridium had to face two deadlines in August of this year. First, on August 11 a waiver of financial covenants on a loan of $800 million expired. Under the covenants, Iridium had to raise enough revenues and subscribers (particularly it had to have about 27,000 subscribers by May 31, and it had only 10,294 subscribers). The second deadline

debts. Indeed, one of main reasons mentioned as the cause of Iridium's failure is the fact that cell phones, which have had very good results, are much less expensive than Iridium's handsets.

Other systems on their way of entering into the same market are:[39]

- ✓ Globalstar also intends to provide mobile communications with a constellation of 48 satellites[40] from LEO. The main investors of this system comprise of Loral Space & Communications, Aerospatiale, Alcatel Espace, and Alenia Aerospazio among others. By April 1998 it had 16 satellites in orbit (879 miles/1,410 Km).[41] The company had many problems at the beginning when it lost 12 Globalstar satellites during a launching last September 10, 1998. The plans are to continue launching until the end of 1999, and to start operating in the year 2000.[42]
- ✓ ICO Global Communications was the next operator proposing to have its 12 satellites in orbit. This London based system planned to start launching satellites in June 1999 and to enter into service in August 2000.[43] The goal of ICO is to offer mobile communications from MEO (10,355 Km), not from the traditional LEO. The scenario for ICO has also changed after its filing for bankruptcy on August 27, 1999. ICO announced two weeks before

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was on August 15, when Iridium had to pay $90 million in interests on a loan of $1.45 million in notes. Motorola declared recently that it could not invest more money without an agreement with the other investors. Motorola will not support Iridium alone.

[39] For a detailed information about the current state of the existing commercial satellite operators, see M.A. Caceres, Teal Group Corp. "Commercial Satellite Operators" *Aviation Week & Space Technology* 150:2 Aerospace Source Book (11 January 1999) 223.

[40] *Ibid.* at 259. Globalstar has already launched 16 satellites into orbit and has 36 satellites left.

[41] N. NovichKov & M.A. Taverna, "Starsem Launches Four More Globalstars" *Aviation Week & Space Technology* 150:12 (22 March 1999) 80.

[42] "Russian Launch Aids Globalstar Recovery" *Aviation Week & Space Technology* 150:7 (15 February 1999) 46.

[43] M. A. Taverna, "ICO Nears Completion of Satphone Financing" *Aviation Week & Space Technology* 150:17 (26 April 1999) 81.

that the company was looking for other financing options after failing securing $600 million in financing commitments.[44] ICO says it needs time to reorganize and complete its financing to be an effective competitor.

Globalstar and ICO systems were seen as the main competitors of Iridium. Iridium's failures pose concerns for these systems futures. ICO and Globalstar's shares dropped also the first week of August. Afterwards, only two weeks after Iridium's filing for bankruptcy, ICO suffered the same process. Some analysts were predicting that after Iridium's bankruptcy it will be difficult for other systems to raise capital. Others wonder if the potential millions of customers that these new companies are expecting to reach really exist.[45]

Other systems are currently being developed such as Agrani, from ASC Enterprises Ltd., an Indian incorporated company.[46] There is also Odyssey, Teledesic and Skybridge. These two last systems, Teledesic and Skybridge, are competing to offer broadband services from LEO. The Teledesic project, sponsored by Americans Craig McCaw and Bill Gates, is based on a constellation of 288 satellites in LEO. On the other hand, Skybridge has a French investor, Alcatel Alsthom, and will try to operate 64 LEO satellites.[47]

Finally, as for little LEOs, Orbcomm, from Orbital Communications Corporation, obtained the license to operate on October 1994.[48] Orbcomm was planning a system for the provision of data and location-finding services with a network of 33 satellites. As of September

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[44] J. Hall, "ICO Is Latest Satellite Communications Casualty" (28 August 1999), online: <http://www.space.com>.

[45] J.C. Anselmo and J. Schwartz, *supra* note 38.

[46] Agrani is planning to start its service in 2001, with two GSO satellites, each of them covering the areas of India and Africa, and offering mobile communications and direct-to-home television broadcasting.

[47] P.L. Spector, "Spectrum Sharing and Non-geostationary Systems: WRC-97 Makes Satellite History" *Via Satellite* (February 1998) 98 at 100.

[48] J.P. Schulz, *supra* note 26 at 185.

1998 it had already launched a total of 28 satellites.[49] Other Little LEO systems are STARSYS - Starsys Global Positioning, Inc.- and VITA –Volunteers in Technical Assistance-.[50] The difficulties for these systems are the same as mentioned before: there are too many systems offering data transmission to declare a need for these systems. There are the existing cellular systems, traditional GSO networks, and the proposed Big LEO systems, which can offer more services, and not only data.[51]

The basic question that arises after contemplating the previous outlook is: are these private companies going to survive? The boom of participants on these advanced technologies may be explained by the freshness and the belief of huge economic benefits but the reality is showing that these systems are very expensive compared with the GSO systems. Given the trends towards monopolization of all economic sectors in the hands of some private megacarriers that the world is sustaining, a potential exit from the current state will be the concentration of all of them in just a few actors and the extinction of the rest.

B. Operational Aspects: The Expansion of Telecommunications

It is important for the subject of this study to briefly present the perceptional shift taking place in the telecommunications field. Traditionally, telecommunications was just considered a means of communications with technical regulation as its only internationally treated characteristic. This was the ITU's role in the past. However, the expansion of telecommunications networks and the technological advances have promoted a change on the

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[49] "Commercial Satellite Operators," *supra* note 39 at 235.

[50] For these and Big LEO systems, see *also* S. Metheekul, *GMPCS Regulations in the U.S. and Thailand* (LL.M. Thesis, Montreal: Institute of Air and Space Law, 1997) [unpublished] at 13ff.

[51] J.P. Schulz, *supra* note 26 at 189.

sector significance. Particularly important is the trend towards the commercialization of space activities and the privatization of international organizations.

1. Dual Role of Telecommunications

As of some years ago, telecommunications has been the object of international trade regulations. Apart from a mean of communications, telecommunications is a service which attracts large investments.[52] This is why the WTO entered into the regulation of this sector.

The important issue to introduce here is the dual role of the telecommunications sector. First, telecommunications services have become tradeable. The convergence between telecommunications, broadcasting, and computer technology has given birth to the concept of 'information society' where the information itself is a tradeable commodity.[53] The difficulty in establishing a border between these three fields gives a new dimension to the concept of telecommunications. This new approach to telecommunications as an object of trade is also contemplated, first, with the evolution of new technological systems such as satellite constellations where the traditional national borders are surpassed, and second, with a trend towards strategic transnational alliances and multinational corporations that operate under different national legislations. These circumstances result in an increase of international trade and of commercial transactions among countries. Subsequently, this situation calls for the need of regulation of subjects such as market access conditions, opening of these markets to competition, rules for foreign operators, and the pricing for interconnection with the national

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[52] H.E. Hudson, *supra* note 11 at 417ff.

[53] P. Malanczuk & H. de Vlaam, "International Trade in Telecommunications Services and the Results of the Uruguay Round of GATT" (1996) 3 Telecom. & Sp. J. 269 at 272ff.

telecommunication network, among others.[54] These problems and their regulation will be studied below.

The second aspect of telecommunications is its nature as a relational infrastructure. The development and liberalization of telecommunications is essential for other economic sectors. Historically, trade on services received very little attention in the past due to the economists' idea that all international economic relations were manifested through commerce on goods, that is, through a physical asset.[55] This theory did not anticipate the current information networks that deliver data for all sorts of services, such as financial services, air transport (all the reservations systems are international telecommunications networks), or travel services.

Until the mid-1980s, two international regimes for trade and telecommunications coexisted without invading the sphere of each other. Specifically, the international trade regime was under the *General Agreement on Tariffs and Trade*,[56] and the ITU regulated telecommunications mainly from a technical point of view.[57] The above-explained evolvement changed this distinction, and the first manifestation of this is the treatment of telecommunications as a service sector under the multilateral trade system of the WTO, as this study analyzes later.

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[54] V.T. Coates, T.M. LaPorte & M.G. Young, "Global Telecommunications and Export of Services: the Promise and the Risk" (1993) 36: 6 Business Horizons 23 at 23.

[55] V.T. Coates, *ibid.*

[56] The General Agreement on Tariffs and Trade will be explained below as the antecessor of the current WTO.

[57] H.E. Hudson, *supra* note 11 at 418.

2. The Effect of the Commercialization of Space Activities on Telecommunications: Towards the Privatization

One already mentioned factor that strongly influenced the application of trade law to satellite communications systems is the increased commercialization of space activities. Associated to this, the phenomenon of privatization appears specially linked. At the beginning of the space era, all space activities had a governmental character, and the nature of telecommunications activities was that of a public utility. Subsequently, the existing international organizations, such as INTELSAT or INMARSAT, were formed and participated by States.

The later years have seen the appearance of thousands of private ventures dealing with international telecommunications. The best example is the satellite constellations that were the object of study in the previous section. In the domestic arena, there has been a shifting of operations from the government to the private sector. This privatization comes along with a very important regulatory change of these last years, that is, the separation of regulatory responsibilities from the management of telecommunications systems. Regulatory agencies are being created in many countries, with the consequential separation of functions, and the traditional government monopolies are been dismantled, and transferred to private companies.

In the international forum, with these private companies offering the same services, the monopolistic status of the traditionally called *Intergovernmental Satellite Organizations* [hereinafter ISOs] is jeopardized. This is particularly the case of INTELSAT. This organization had a basic mission in the past. Its goal was to provide universal service on a non-discriminatory basis, promoting the concept of "international public telecommunications services."[58] The

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[58] Article III *Agreement Relating to the International Telecommunications Satellite Organization* "INTELSAT," 20 August 1971, 23 U.S.T. 3813, T.I.A.S. 7532 (entered into force 12 February 1973).

current situation does not justify the "public good argument" in favor of INTELSAT, with so many companies offering the same services.[59]

These organizations are moving towards a structure increasingly private in nature and not intergovernmental.[60] In response, international organizations have been looking for strategies to introduce commercialization principles in their functioning and to facilitate competition with private companies.[61] As competition increased, due to the existence of so many private companies offering services, public international organizations such as INTELSAT, or EUTELSAT started acting like private entities. For example, INTELSAT started leasing orbital slots to over thirty-five countries for their domestic services.[62]

The most important actions involve the privatization of the ISOs. The first case was INMARSAT transforming into a private company on April 1st, 1999. The new result of the process is a private, London-based company, INMARSAT Ltd.[63] This company will compete with ICO Global Communications, a corporation that was created by INMARSAT in order to offer mobile communications. The initial purpose of INMARSAT creating ICO was the

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[59] P. A. Salin, *Regulatory Changes Affecting Satellite Communications in the Late 1990s, For the Benefit and in the Interests of All Countries* (D.C.L. Thesis, Institute of Air and Space Law, McGill University, 1997) [unpublished] at 139. This author provides a broad explanation about the process of restructuring of INTELSAT and INMARSAT, its history, its causes, and its current problems.

[60] G. Venturini, "Private Actors and Space Law: The Influence of Competition on Satellite Communications" in G. Lafferranderie & D. Crowther, eds., *Outlook on Space Law over the Next 30 Years: Essays Published for the 30th Anniversary of the Outer Space Treaty* (The Hague: Kluwer Law International, 1997) 49 at 52.

[61] H. L. van Traa-Engelman, "Commercialization of Space Activities: Legal Requirements Constituting a Basic Incentive for Private Enterprise Involvement" (1996) 12 Sp. Pol'y 119 at 122.

[62] J. F. Galloway, "Privatizing an International Cooperative? The Case of INTELSAT" (1996) Proceedings of the Thirty-ninth Colloquium on the Law of Outer Space, IISL, October 7-11, 1996 144 at 145.

[63] "INMARSAT Privatization May Heighten MSS Competition" *Satellite News* 22:16 (19 April 1999), online: LEXIS-NEXIS (News).

facilitation of operations in order to compete with other systems such as Iridium.[64] The reason for the privatization is the organization's belief that it will increase the possibilities to attract investment. Its intention was to keep the equity of the current investors and to introduce new ones.[65]

INTELSAT has for several years been thinking of restructuring the organization. In 1992, the Board of Governors adopted some recommendations promoting for organizational changes towards a more commercial orientation.[66] INTELSAT's first step towards privatization was the creation of an affiliate company called New Skies Satellites NV ('New Skies') for the provision of non-core services, such as broadcasting, leaving INTELSAT focused on basic telecommunication services.[67] Moreover, they expected to obtain the final approval for privatizing from the member governments by late 2000. The reason for a privatization is, according to Mr. Conny Kullman, INTELSAT Director General, the loss of INTELSAT's competitive position in relation to "larger, better-funded, and more commercially agile competitors."[68] The organization wants to emerge as a "New INTELSAT", functioning as a corporate model, and preserving its traditional public character, providing non-commercial services to remote areas and countries.

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[64] J. F. Galloway, *supra* note 62 at 146.

[65] "'Consensus Decision' Reached on April 1 INMARSAT Privatization" *Satellite Week* (5 October 1998), online: LEXIS-NEXIS (News).

[66] P. A. Salin, *supra* note 59 at 140.

[67] H. Wong, "Comment: 2001: A Space Legislation Odyssey – A proposed Model For Reforming the Intergovernmental Satellite Organizations" (1998) 48 Am. U.L. Rev. 547 at 570.

[68] INTELSAT, News Release 99-24e, "INTELSAT CEO Provides Overview of Organization's Privatization Plans to United Nations Conference in Viena" (20 July 1999), online: Intelsat <http://www.intelsat.int/news/press>. According to Mr. Kullman, the purpose is "to ensure INTELSAT's future market responsiveness for our customers, to better address emerging market applications and, importantly, to continue our fundamental missions of providing connectivity to all countries of the world."

EUTELSAT has also announced the spin-off of a limited company, EUTELSAT SA, by mid-2000. The new company will be incorporated under French law and its final shareholding is still to be determined. As in the other cases, EUTELSAT has announced that they will maintain the intergovernmental organization to ensure that basic principles, such as the pan-European coverage, are respected.[69]

3. U.S. Laws on the Privatization of ISOs

This privatization process is, of course, determined by national legislations. It is interesting to see what the recent U.S. policy has been because of its influence on the privatization of the ISOs. The beginning of satellite competition in the U.S. is marked by the enactment of Presidential Determination No. 85-2 by the Reagan Administration in 1984, authorizing the entry of new competitors into the satellite transborder telecommunications market.[70] Since then, INTELSAT has had to take the competition of new companies into account.[71]

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[69] M.A. Taverna, "EUTELSAT Approves Privatization Plan" *Aviation Week & Space Technology* 150:21 (24 May 1999) 62.

[70] For an analysis about the evolution of the U.S. regulations about satellite communications, see P.A. Salin, *supra* note 59 at 174ff. In the traditional U.S. legislation there was a distinction between domestic and international services. The *Domestic International Satellite Consolidation Order* or DISCO I, from 1996, eliminated the distinction between domestic (domsats) and separate systems (international) services. From that date, FSS, MSS, and DBS operators may provide both national and international services. What these set of rules did is unifying the U.S. licensing system for all types of services. Afterwards, a second set of rules, DISCO 2, was enacted regulating the entrance of non-U.S. satellite systems to the domestic market. The philosophy of DISCO 2 is the regulation of market access for these foreign providers, based on reciprocity principles. The U.S. is concerned about fair competition and market access, that is, whether these foreign systems will cause a disadvantage situation for U.S. providers in the U.S. market, and if domestic providers benefit from similar opportunities in foreign countries. See P. Salin, at 211ff. Another U.S. initiative was the enactment of the Space Commercialization Promotion Act, H.R. 3936, 104th Cong.

After some years of trying to increase competition, the U.S. recent policy has focused on restructuring these organizations and putting them on the path for their privatization.[72] Specifically, the U.S. legislators have determined the speed and the way of the INTELSAT's privatization. In this sense, it is important to mention two particular actions from the recent U.S. regulatory history.

a. The Bliley Bill

First, in June 1997, House Representative Thomas Bliley introduced the generally referred to as the 'Bliley Bill' in the 105th U.S. Congress.[73] This bill, officially titled *Communications Satellite Competition and Privatization Act of 1997*, tries to amend the Communications Satellite Act of 1962 by calling for the privatization of all treaty-established governmental satellite organizations.[74] The bill received great support from the satellite industry

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(1996). This bill passed the House of Representatives, but it is still in the Senate. According to Patrick A. Salin, this bill "reinforces the commercialization of all aspects of the US government involvement in space programs, [...] and it strengthens the reciprocity principle. *Ibid.* at 239.

[71] H. Wong, *supra* note 67 at 563.

[72] H. Wong, *supra* note 67. The U.S. scenario is now dominated by how to accomplish the privatization of these organizations without causing any damage to competition and other commercial operators and, how to regulate the new Communications Satellite Corporation [hereinafter COMSAT] after its reclassification as a non-dominant carrier by the Federal Communications Commission [hereinafter FCC] in April 1998. Historically, the American telecommunications scene was regulated by the Communications Satellite Act of 1962 which represented the first international text regulating the commercial space activity. This act created COMSAT to coordinate the system. For many years, this private corporation was the only access provider to the INTELSAT and INMARSAT systems, having the status of dominant carrier and a particular regulation by the FCC as well as many advantages derived of that situation. Now, the situation has changed. Specifically, at the moment Lockheed Martin is on its way of acquiring COMSAT. To accomplish this, for example, the ownership restrictions on COMSAT have to change to permit the purchase by one single investor of more than the ten per cent of the voting shares.

[73] Communications Satellite Competition and Privatization Act of 1997, H.R. 1872, 105th Cong. (1997).

[74] H. Wong, *supra* note 67 at 574.

and from Congress. This proposal attempts to regulate the privatization of ISOs in a manner that would not harm competition in U.S. telecommunications markets. Particularly, it wants to restrict the ISOs' provision of some kind of services in the U.S. market unless they are privatized without harming other operators.[75] It also establishes a very strict schedule for the privatization of INTELSAT and INMARSAT. Furthermore, the Bliley Bill wants to prevent any of the ISOs from entering into new markets until their full privatization. The regulation wants to avoid their abuse of old privileges and advantages.

This rulemaking encountered some opposition mainly referring to the strict time schedule for the privatization. The bill was seen by many representatives as a unilateral action of the U.S., too aggressive with respect to the other country members of these ISOs, which had to give also their approval for the privatization.[76] Regardless, the bill passed in the U.S. House of Representatives and was referred to the Senate for review.

At the same time, the Senate considered another similar type of measure.[77] Senator Conrad Burns, chairman of the Senate Subcommittee on Communications, introduced the *International Satellite Communications Reform Act of 1998*[78] on July 28, 1998, which contains similar content as the 'Bliley Bill', but has less aggressive provisions with respect to the schedule for the privatization of the ISOs, therefore giving more deference to the international decisions adopted by the organizations themselves on their privatization.[79]

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[75] H. Wong, *ibid.* at 575ff.

[76] *Ibid.* at 578-579.

[77] The introduction of these measures is benefiting from the dual intervention and cooperation between the House of Representatives and the Senate.

[78] International Satellite Communications Reform Act of 1998, S. 2365 (1998).

[79] H. Wong, *supra* note 67, at 581-582.

b. The Orbit Act: Including "Fresh Look" Provisions?

The second stage corresponds to another bill introduced later also by Senator Conrad Burns. On February 4, 1999, Senator Burns introduced "ORBIT," the *Open-market Reorganization for the Betterment of International Telecommunications Act*, [hereinafter the "ORBIT Act"] in the 106th U.S. Congress, which passed unanimously in the Senate[80] and was introduced in the House of Representatives, but has not yet been decided.[81] The purpose of this act similarly provides:

> To promote a fully competitive domestic and international market for satellite communications services... by fully encouraging the privatization of the intergovernmental satellite organizations, INTELSAT and INMARSAT, and reforming the regulatory framework of the Comsat corporation.[82]

The most important provisions of this act are:

- The encouragement for the privatization of INTELSAT as soon as possible, no later than January 1, 2002.[83] With respect to INMARSAT, which has been already privatized, the act calls for the full implementation of the privatization agreement.

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[80] The bill, after being amended on May 5, passed in the Senate with unanimous consent on July 1, 1999. On July 12 it was sent to the House of Representatives and immediately referred to the House Committee on Commerce. At the moment, it is being discussed there. "Bill Summary & Status for the 106th Congress" Legislative Comment on the *Open-market Reorganization for the Betterment of International Telecommunications Act.* S. 376 (1999), online: Thomas: Legislative Information on the Internet <http://thomas.loc.gov/cgi-bin/bdquery/z?d106:SN00376:@@@X>.

[81] "Satellite Reform Stalled by House: Lack of Progress on Satellite Reform in House Threatens Reform Effort" (9 August 1999), online: Sen. Conrad Burns' Homepage <http://www.senate.gov/~burns/p990809b.htm>.

[82] Open-market Reorganization for the Betterment of International Telecommunications Act, S. 376, 106th Cong., 1st Sess. (1999), s. 2, Purpose.

[83] ORBIT Act, s. 601. (1), Policy of the United States.

- The imposition of certain restrictions on INTELSAT's operations, until July 1, 2001, or until it "achieves a pro-competitive privatization ... if privatization occurs earlier."[84] The restrictions concern the prohibition of providing services in the U.S. market to carriers other than COMSAT, which was the traditional U.S. signatory in INTELSAT, and the one that had historically this right.[85]
- Section 614 of the Act regulates the consequences in the case of failure of INTELSAT in the privatization. The Act has strengthened the consequences with respect to the previous bills. In case of failure by January 1, 2002:

  1. Preference will be given to commercial private sector providers of satellite space segment, rather than to INTELSAT and INMARSAT, for procurement of satellite services.

  2. "Withdraw as a party from INTELSAT." Naturally, a *Reservation Clause* is included in which the President will be able to determine if, in the national interest of the U.S., is reasonable to provide an extension of time for the completion of the privatization process.

Another very important provision is Section 622, referring to the "Abrogation of Contracts Prohibited."[86]

With respect to the *Abrogation* provision, one of the issues that caused controversy during the last months was the introduction in both of the bills of "fresh look" provisions. These

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[84] ORBIT Act, s. 603. (a), Restrictions Pending Privatization.

[85] COMSAT has been originally the sole designated entity of the U.S. in INTELSAT and INMARSAT. See P. A. Salin, *supra* note 59 at 243ff.

[86] ORBIT Act, s. 622, Abrogation of contracts Prohibited, "Nothing in this Act or the Communications Act of 1934 ... shall be construed to modify or invalidate any contract or agreement involving COMSAT, INTELSAT, or any terms or conditions of such agreement in force on the date of enactment of the Open-market Reorganization for the Betterment of International Telecommunications Act ..."

provisions, which appeared in the aforementioned "Bliley Bill," allow satellite telecommunications companies to renegotiate all of their concluded contracts with COMSAT and allow these other carriers immediate access to INTELSAT's satellites. Senator Conrad Burns always opposed this measure maintaining that it did not lead to fair competition, and even that it was unconstitutional.[87] On the other hand, COMSAT already expressed its opinion with the enactment of the "Bliley Bill" last year. According to this corporation, a "fresh look" provision would leave the U.S. government open to liability claims for any damages caused to COMSAT,[88] due to the loss of customers and benefits.[89] This issue is influenced by the purchase of COMSAT by Lockheed Martin. Lockheed is naturally upset with the content of the final act, because it could leave the merger COMSAT-Lockheed without any credibility to sign contracts, if this "fresh look" provision is included.

On the contrary, several long distance carriers, such as PanAmSat, MCI WorldCom, and AT&T, were pressuring for the introduction of the "fresh look" provisions in the "ORBIT Act." Indeed, their opposition to the "ORBIT Bill" was due to the fact that it does not give to telecommunications providers the possibility of renegotiating multi-year agreements with

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[87] "Burns Against Fresh Look, Immediate Access: 'Lack of Consistency' in Arguments of Long Distance Companies" (4 May 1999), online: Sen. Conrad Burns' Homepage <http://www.senate.gov/~burns/p990504b.htm>.

[88] COMSAT maintains this liability under the application of the Tucker Act. The Tucker Act allows someone or a company to file a claim against an act of Congress or an executive department regulation. It can be an action for monetary damages that arise outside of tort. It is a way to sue the US Government for a regulation or an act which cause monetary harm to the company. "The Tucker Act ... was a response by Congress to the inadequacies of the original Court of Claims legislation. By this act, the jurisdiction of the Court is extended to include claims founded upon the Constitution, act of Congress, or executive department regulation, as well as claims for liquidated or unliquidated damages in cases not sounding in tort ..." *Black's Law Dictionary*, 6th ed., *s.v.* "Tucker Act".

[89] "Bill To Privatize Intelsat Cleared By House Panel" *Communications Today* (19 March 1998), online: LEXIS-NEXIS (News).

COMSAT. Moreover, it does not allow for immediate access to INTELSAT satellites, a feature which would help them bypass COMSAT.[90] These companies maintain it is unfair for Lockheed to buy COMSAT unchanged, benefiting from its historical benefits.[91]

The problem is not over, since now it is up to the House to decide on the "ORBIT Act," and Senator Bliley could intervene in another direction, following his last year's regulation.[92]

Finally, INTELSAT does not seem to be very happy with the "ORBIT Act." According to them, the act is a "unilateral mandate by the U.S. Congress on a 143-member nation international organization."[93] Mr. Conny Kullman, INTELSAT Director General, has complained against certain provisions of the "ORBIT Act" in several occasions. He sustained that any legislation trying to mandate change in the INTELSAT structure shall, more than facilitate the privatization, delay its normal evolution. Furthermore, Mr. Kullman criticizes the premises of the act, which assumes that INTELSAT is a monopoly, and expresses his doubts about the pro-competitive character of the act, when it does not allow U.S. access to any user of the INTELSAT system providing certain services, such as *Direct-to-Home* (DTH) services, or DBS services.[94] Due to this opposition between INTELSAT and the U.S. government, the organization was thinking of relocating its headquarters in another country.

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[90] With respect to the direct access to INTELSAT's satellites, the purpose of satellite carriers is to have this access in order not to have to contract with COMSAT. As it was expressed before, when commenting the most important provisions of the 'ORBIT Act', the final date for this access is established in July 1, 2001, sixth months before than the fixed date for the privatization of INTELSAT, January 1, 2002. In previous versions of the act, however, these restrictions were maintained until the end of the privatization.

[91] "Senate Satellite Bill Faces Tough Fight in the House" *Aerospace Daily* 191:3 (6 July 1999) 20.

[92] *Ibid.*

[93] In the words of Tony Trujillo, INTELSAT chief lobbyst, "Burns INTELSAT Privatization Bill Approved in Senate" *Satellite Week* (5 July 1999), online: LEXIS-NEXIS (News).

[94] See INTELSAT, News Release 99-02, "INTELSAT Statement On Satellite Reform Legislation" (10 February 1999); and News Release 99-10, "INTELSAT CEO Cautions Senate On Satellite Legislation" (25 March 1999), online: Intelsat <http://www.intelsat.int/news/press>

The interest in this domestic U.S. regulatory problem is clear. The U.S. has tried to completely control the privatization of INTELSAT, and of course, the organization, composed by many other countries, does not agree with these procedures. This regulatory measure shows the economic implications of privatizing these organizations, and the influence of national laws, some causing more effects than others. Remembering the State participation, in the case of INTELSAT, the U.S. contributes with approximately a 19% of its total funding, whereas the four European space powers, Germany, France, Italy, and UK, contribute to the organization with a 21%.[95] This means that although the U.S. participation is high, the European participation and other countries' participation is important enough for the U.S. regulatory attempts to succinct controversy inside the organization.

c. FCC Participation

The last important actions regarding this subject come from the Federal Communications Commission [hereinafter FCC]. In line with its goal of increasing competition in telecommunications, the FCC enacted a policy this September 15, 1999[96] which allows U.S. users of the INTELSAT system to have direct access to its satellites, avoiding having to go through COMSAT, as it was before. With this measure, operators will be able to conclude contracts with INTELSAT paying the same rates that this organization charges its Signatories.[97]

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[95] P.A. Salin, *supra* note 59 at 143.

[96] In the Matter of Direct Access to the INTELSAT System, Federal Communications Commission, FCC 99-236 (1999) (report & order), IB Docket No. 98-192.

[97] It specifically guarantees the so called Level 3 Access to INTELSAT. In order to preserve fair competition, the FCC limits direct access to INTELSAT signatories or affiliates that control 50 or more percent of the INTELSAT satellites consumed in that signatory's respective home market. However, these signatories will have direct access for communications with other non dominant markets.

Subsequently, U.S. companies will compete in a level playing field with foreign companies that have already direct access to the INTELSAT system.

The first point that the FCC points out is the Congress prerogatives in the regulation of this subject.

> We recognize that Congress may consider legislation on the issue of direct access to INTELSAT. Comprehensive bills were passed in 1998 by the House and by the Senate this year, that would rewrite the Satellite Act. While our decision in this proceeding is based on current law, Congress retains the prerogative to legislate in this area. Congressional action clearly would supersede any inconsistent interim action taken in this proceeding.[98]

The FCC remembers the role of COMSAT as signatory of INTELSAT. Therewise, as COMSAT will continue incurring in expenses for this role, it will be able now to require direct access users to pay COMSAT a surcharge of 5.58 percent of the utilization charge paid to INTELSAT. It is considered that, through this surcharge, COMSAT will recover its expenses. Nevertheless, the FCC does not grant a fresh look provision with respect to long term contracts with COMSAT, as it was been requested by operators, as mentioned above. This change of policy, although from a different U.S. public body, can be considered as a partial concession to INTELSAT's complains.

The FCC provides that they hold the authority to enact the previous policy according to the Communications Satellite Act of 1962 and the Communications Act of 1934.[99] In this respect, the FCC has very important powers to set the conditions affecting competition in the international telecommunications' market. However, the U.S. Congress establishes the final legislative measures and, in this respect, it will be able to decide on the aforementioned case of

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[98] In the Matter of Direct Access to the INTELSAT System, *Introduction, supra* note 96 at 2-3.

[99] *Ibid. Communications Satellite Act of 1962* as amended, 47 U.S.C 701 (1962); and *Communications Act 1934*, 47 U.S.C. 151 (1934).

access to INTELSAT, even if at the moment the bills commented on are pending in the House of Representatives.

Chapter Two - Institutional Participation: WTO and ITU

As mentioned above in the Introduction international satellite telecommunications fall under a group of outer space treaties which make a whole set of principles of public international law applicable to this subject. However, although some of these treaties constitute the basis of any activity in outer space they do not create a permanent agency or organization to solve the current problems derived from frequency or commercial conflicts among States. This Chapter's goal is to present the structure and functioning of the two international bodies that cope with the practical issues of telecommunications, initially, from different points of view. The ITU has historically regulated from a technical point of view the use of outer space through satellites. On the other hand, the WTO started affecting telecommunications some years ago when decided to promote the liberalization of trade of all sorts of telecommunications. Although the WTO's participation in the object of this analysis is very recent and the ITU represents an historical institution, it is justified to present first the WTO and then the ITU, for the establishment of a better link with following sections.

A. The World Trade Organization

The approach of the WTO to the regulation of telecommunications is completely different from the ITU technical approach. In this case, in a different way than with the ITU, whose function was the regulation of telecommunications since its beginning, the intervention of the WTO in this subject is quite recent, as recent as the organization itself.

The WTO is a multilateral trade organization which pursues the opening up of international trade in many sectors as possible. The current organization has operated only since

January 1st, 1995, after its creation by the Uruguay round, which started in 1986 and finished in 1994.[100]

1. The General Agreement on Tariffs and Trade

The original *General Agreement on Tariffs and Trade*, otherwise known as the GATT Agreement, set out a framework in order to deal with trade barriers. As a matter of fact, the GATT Agreement was the final outcome of a more ambitious project, the establishment of an *international trade organization*, resulting from the Havana Charter, in 1947.[101]

The GATT agreement intended to eliminate traditional national instruments of commercial protection, which were impeding global trade and growth of economies. The GATT tried to abolish national barriers in the commerce on goods. The instruments of commercial protection can take different forms, from the classical tariffs, where a percentage is imposed in the value of imports, to other obstacles, generally referred to as non-tariff barriers as a whole. These non-tariff barriers have changed through the years. The last years, they used to be internal measures imposed by administrative means.[102]

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[100] For an analysis of the GATT and the WTO, see: J. H. Jackson, *The World Trading System: Law and Policy of International Economic Relations*, 2nd ed. (Cambridge: The Massachusets Institute of Technology, 1997); *B.* McDonald, *The World Trading System: The Uruguay Round and Beyond* (Great Britain: MacMillan Press Ltd., 1998); H. Van Houtte, *The Law of International Trade* (London: Sweet & Maxwell, 1995); and A.O. Krueger, ed., *The WTO as an International Organization* (Chicago: The University of Chicago Press, 1998).

[101] B. McDonald, *ibid.* at 41.

[102] B. McDonald, *supra* note 100 at 35ff. As recent usual alternatives of protection, there is the administered protection, such as dumping, selling the product below cost of production, and countervailing-duty measures, that is, subsidization of exports by the government. Other mechanism of protection which use is increasing is the bilateral trade agreements, which undermine the multilateral trade system of the WTO. See *supra* note 113 at 7ff.

As it was configured in 1947, the old GATT was not an international organization in the traditional sense of the word. It was very limited, comprising only of a small Secretariat and a general Conference of Contracting Parties which met at intervals. The GATT did not have many powers, as the decisions came from agreement among the States parties.[103] Moreover, the GATT was intended to cover only commerce on goods, not in services.

The GATT operated through a series of progressive negotiations based on mutual concessions and the elaboration of certain rules among the States. The traditional form in which the GATT functions is through "rounds," referred to as such because they involve a round of negotiations among all the parties. After the round is concluded, the agreed measures are bound or fixed and made applicable to all the parties of the GATT, now the WTO, according to the *Most Favoured Nation* [hereinafter MFN] rule.[104] The MFN principle implies that a member who commits to open its market cannot close it in a discriminatory manner to certain WTO members. These tariffs cannot generally be raised unless there is a safeguard measure or the "escape clause" is invoked.[105] This was, and still is, the basic functioning of the WTO.

After seven rounds of negotiations, the GATT has progressively opened more and more sectors to trade liberalization and has applied to more countries. Indeed, the first multilateral round (Geneva, 1947) started with 23 countries and the last one in Uruguay involved the participation of 125 countries.

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[103] H. Van Houtte, *supra* note 100 at 52.

[104] B. McDonald, *supra* note 100 at 33.

[105] There are many sorts of safeguards in the GATT system that allow countries to avoid the obligations of the treaty. The most significant mechanism, however, is the "escape clause" from Article XIX of the GATT Treaty. The country that alleges it must show that imports of a product are increasing in its territory, and that this increase is causing an injury to domestic producers of competitive products. See J. H. Jackson, *supra* note 100 at 180ff.

2. The Uruguay Round

The Final Act of the Uruguay Round was signed in Marrakech, Morocco, in April 1994, after almost eight years of difficult negotiations. This treaty introduces important changes to the traditional GATT. The creation of the WTO is the most important change, meaning the establishment of a single institutional framework. The WTO surpasses the traditional GATT limitation to goods and comprises not only of the GATT (which is known now as the 'GATT 1994'), but also of the *General Agreement on Trade in Services* [hereinafter the GATS], the Agreement on *Trade Related Aspects of Intellectual Property Rights* [TRIPs Agreement], and the Agreement on *Trade Related Investment Measures* [TRIM agreement].

By extending the organization coverage to other sectors, such as services, the Final Act introduced the application of trade sanctions and the dispute settlement mechanisms to them. Clearly, the possibility of these trade sanctions, including retaliatory measures, can be an important tool for implementing international trade agreements.[106] The WTO introduces for the first time the possibility of cross retaliation, that is, in the case of failure of an agreement by one of the parties, the other can respond with the withdrawal of concessions or trade sanctions in another area. The WTO has a special force as an international organization due to its contractual obligations contained in each Member State's schedule and the enforcement of the dispute resolution system.[107]

Another very important element is the establishment of a new organization, the WTO, with more powers and a unified structure in order to deal uniformly with all the sectors.[108] The

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[106] B. McDonald, *supra* note 100 at 38.

[107] R. Blackhurst, "The Capacity of the WTO to Fulfill Its Mandate" in A.O. Krueger, ed., *supra* note 100 at 32.

[108] G.R. Pipe, "Uruguay Round Trade Agreement Provisions Affecting Telecommunications" Strategic Planning Unit, International Telecommunication Union, Geneva, October 1994. And McDonald, *supra* note 100 at 41ff.

WTO is headed by a Ministerial Conference, composed of representatives of the State Members, which meet at least every two years. Then, a General Council administers the decisions of the Ministerial Conference between two different meetings. This Council acts also as the Dispute Settlement Body and as the Trade Policy Review Body. This body exercises a *trade policy review mechanism* in order to revise the trade policies of the main players every two years and must give the organization a more coherent approach to the economic policy field in general.

The Council for Trade in Services deals with the implementation of the GATS. This body reports to the General Council, as well as the Council for Trade in Goods and the Council for the TRIPs.[109] Then, the organization relies also on a Secretariat, which provides the administrative support, and a Director General.

The Uruguay Round also meant the improvement of the dispute settlement procedures. The dispute settlement mechanism is based on the 'Panels'. In the past, the Panels were considered not very reliable due to the rule that panel decisions had to be decided by consensus in the Committee of Contracting parties, which means that the country against which the decision had been adopted could block its implementation. Now the rule has been inverted and the decisions are adopted by majority voting and will only be blocked if there is consensus to do so in the Committee of Contracting Parties.[110] This is the most important modification introduced by the Uruguay Round.

3. The General Agreement on Trade in Services

The GATS constitutes the relevant text for the object of this study. The GATS consists of three blocks: a Framework Agreement, which contains basic obligations for the Member

[109] R. Blackhurst, *supra* note 107 at 33.

[110] McDonald, *supra* note 100 at 43-44.

countries and means an extension of the traditional principles and rules of the GATT to services; eight annexes directed to specific service sectors, one of them being the Telecommunications Annex; and the Schedules containing the National Commitments of the States parties, where the Members make their compromises regarding market access to each of the service sectors.[111] The goal of this Agreement is recognized in the Preamble of the text as the "early achievement of progressively higher levels of liberalization of trade in services."[112]

Due to the growing economic importance of this sector, services were included under the scope of the WTO. A number of circumstances, such as the fall of transport costs and tariff barriers and the facilitation of communications resulted in an expansion of trade in services through the years.[113] The United States, after experiencing a deficit in its trade in goods, pushed for the beginning of the negotiations on this sector. The U.S. wanted to compensate for that deficit in goods by increasing its trade in services through exportation.[114]

a. Is Trade in Services Different From Trade in Goods?

Since the Uruguay Round, telecommunications have been regulated by the GATS as a service. This is the reason why it is interesting to see what is the rationale that can distinguish the regulation between goods and services. There is no formal distinction between these two categories but, according to some authors, services can be characterized "as commercial activities that are not embodied fairly directly in tradeable, tangible products."[115] The sectors of

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[111] G.R. Pipe, *supra* note 108 at 4.

[112] General Agreement on Tariffs and Trade – Multilateral Trade Negotiations (The Uruguay Round): *General Agreement on Trade in Services*, December 15, 1993 [hereinafter, cited as 'GATS Agreement']; 33 I.L.M. 44 (1994) at 48.

[113] A. O. Krueger, "Introduction" in A. O. Krueger, ed., *supra* note 100 at 3.

[114] P. Malanczuk & H. de Vlaam, *supra* note 53 at 271.

[115] *Ibid.*, at 271, definition cited from Mestmäcker and Cass and Noam (Footnote 11).

goods and services are in fact different. The main problem enacting the GATS was the conceptual difficulty in applying the traditional economic principles of the GATT to trade in services. For example, the application of the "national treatment" clause presented problems, since it seemed to require a different analysis depending on the particular sector. With certain service sectors, such as financial services, there was a need of enacting governmental regulations in order to protect consumers.[116]

Barriers to trade in services present differences with respect to trade in goods. Technically speaking, trade in services does not find obstacles at national borders, like trade in goods does. In this case, barriers will vary depending on the characteristics of the specific service. This is the factor that made the WTO to take a sector approach to the regulation of different sectors.[117] Trade barriers to services arise from national regulations configuring different sectors, from lack of transparency in the rules, from the protection of nationals from foreign competition, and from reservation of sectors to national monopolies, among other instruments.[118] Therefore, in order to advance in the liberalization of trade in services, it is necessary to do something else than expanding the GATT principles to these sectors, as this document will show below in the analysis of these texts.

b. Basic Functioning of the GATS System

It is important to know what the obligations of the GATS Agreement mean in order to understand later the impact or the importance of the provisions adopted in the

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[116] J.H. Jackson, *supra* note 100 at 306ff.

[117] Apart from the Annex on Telecommunications, there are seven other annexes: on movement of natural persons supplying services under the Agreement; on financial services; on air transport services; on negotiations on basic telecommunications; and on negotiations on maritime transport services, *supra* note 112 at 69ff.

[118] P. Malanczuk & H. de Vlaam, *supra* note 53 at 272.

Telecommunications agreement of 1997. The GATS Agreement is based in several principles that act as pillars. As mentioned above, in the main part of the cases the GATS Agreement adapts to services the general obligations contained in the GATT Agreement applicable to goods. Functioning as principles of non-discrimination among countries are the Most-Favoured-Nation [hereinafter MFN] principle and the national treatment clause.[119]

The MFN clause is defined in Article II of the GATS Agreement and it implies that every Member will give to any service or service supplier of "any other member, treatment no less favourable than that it accords to like services and service suppliers of any other country."[120] Therefore, this clause establishes an obligation for every Member of not discriminating any country, although there is a possibility for States to list exemptions to the application of this clause. Second, the national treatment clause implies that each country will grant to services or service suppliers of any other Member "treatment no less favourable than that it accords to its own like services and service suppliers."[121] Indeed, this provision specifies that it will be considered "less favourable" if the Member changes "the conditions of competition" in favor of its own services or service suppliers.

Afterwards, the main obligations are contained in the "Specific Commitments" from the Members. These commitments are lists of schedules from each Member for the liberalization of each of the sectors. In these lists, each Member establishes its obligations and its schedule regarding market access for each service. The lists are organized according to the four modes of supply that the GATS Agreement recognizes that can be summarized[122] as:

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[119] See generally J.H. Jackson, *supra* note 100 at 157ff and 306ff.

[120] GATS Agreement, *supra* note 112 at 49.

[121] *Ibid.* at 60, Art. XVII, *National Treatment.*

[122] As in Jackson, *supra* note 100 at 308, citing B. Hoekman at *The General Agreement on Trade in Services*, in OECD Documents, *The New World Trading System: Readings* (Paris: OECD, 1995) 177. The four modes of supply are defined in Art. I, *Scope and Definition*, of the GATS Agreement.

- cross border

- movement of consumer

- commercial presence

- movement of personnel

Next and important, the agreement establishes six prohibited measures for every Member that has adopted market access commitments with respect to any service regarding any of the previous modes of supply. According to this prohibition, the Member will not be able to establish any limitations: on the number of service suppliers (e.g., through numerical quotas, monopolies); on the total number of service transactions; on the number of service operations; on the number of natural persons that can be employed; on the type of legal entity that has to supply a service; and finally, on the participation of foreign capital in the shareholding of national companies.[123] As the reader can figure out, these prohibitions are relevant since almost all the national legislations had historically restrictions in terms of monopolies or number of suppliers and restrictions to the participation of foreign capital.

Therefore, the real effects of the GATS Agreement are in the Scheduled Commitments and, in this respect, there are thousand of pages of national commitments attached to the agreement. In order to consider if a particular country has made compromises it is necessary to go to its schedules and look with respect to the four modes of supply for each particular service. Moreover, it is necessary to look if the country has tabled exemptions to the MFN clause.

[123] Art. XVI. 2, *Market Access*, *supra* note 112 at 60.

4. Provisions on telecommunications

a. The Annex on Telecommunications

The Uruguay Round enacted an Annex on Telecommunications.[124] This Annex starts recognizing the dual role of telecommunications as a service sector and as a supporting infrastructure that was mentioned before. A very relevant point is that this Annex from 1994 does not apply to the service sector per se, but to the "access to and use of public telecommunications transport networks and services."[125] The purpose of this text is to ensure that countries which make commitments in other sectors will also guaranty the adequate use of their telecommunications networks in order for other countries to be able to develop their services across the borders.[126] The Annex explicitly excludes the sectors of cable and broadcast distribution of radio or television programming from its application.[127]

Another important provision of the Annex is the application of Article III of the GATS, referring to transparency. According to Article III, "each Member shall ensure that relevant information on conditions affecting access to and use of public telecommunications transport networks and services is publicly available."[128] The information to be provided, according to this provision, includes tariffs, conditions of service, and licensing requirements, among others. In Section 6 of the Annex there is an encouragement of technical cooperation in order to develop an advanced telecommunications infrastructure particularly in developing countries.

Finally, in Section 7, the Annex recognizes the "importance of international standards for global compatibility and inter-operability of telecommunications networks and services and undertake[s] to promote such standards through the work of relevant international bodies,

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[124] *Ibid.*, at 73, Annex on Telecommunications.

[125] *Ibid.* at 73.

[126] P. Malanczuk & H. de Vlaam, *supra* note 53 at 280.

[127] Annex, *Scope*, *supra* note 112 at 73.

including the International Telecommunication Union and the International Organization for Standardization."[129] The text calls for the necessary arrangements with these organizations, in order to implement this Annex. According to some authors, this provision can be interpreted as an invitation or a call for ITU's cooperation and assistance.[130]

Apart from the Annex, the actual degree of liberalization depends on the services included on each country's schedule. All the provisions of the GATS will apply to the services included by the States. With respect to telecommunications, under the Schedules of Commitments on telecommunications most of the countries listed a number of value-added or enhanced services, such as electronic mail, voice mail, online data interchange, and facsimile.[131]

During the round of negotiations it became clear that States would only compromise enhanced telecommunications services and not the generally referred 'basic' telecommunications. One suggested reason was the reticence of countries to place under a trade regime services that were considered as public utilities. Another problem was the difficulty on the definition of which services had to be covered.[132] The issue was the application of the MFN clause to these services. The United States was not in conformity with the compromises of other countries about market access. This country was not ready to offer unlimited market access without obtaining the same commitments by the majority of the other members on the GATS

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[128] *Ibid.* at 74.

[129] *Ibid.* at 76.

[130] G. R. Pipe, *supra* note 108 at 14.

[131] G. R. Pipe, *supra* note 108 at 21.

[132] G. R. Pipe, *ibid.* at 22.

agreement. Therefore, due to these U.S. concerns, the negotiations were extended in order to conclude an agreement on basic telecommunications after the Uruguay Round.[133]

b. The Negotiating Group on Basic Telecommunications and the "Fourth Protocol to the General Agreement on Trade in Services"

On December 15, 1993, a "Negotiating Group on Basic Telecommunications" [hereinafter the NGBT] was established in order to open the negotiations for a progressive liberalization of basic telecommunications. At the same time, an Annex on Negotiations on Basic Telecommunications[134] was concluded. This Annex had the effect of delaying the application of Article II of the GATS, relating to the MFN clause, to basic telecommunications services, until the negotiations of the above mentioned group could reach a final report.[135] The NGBT transmitted its final report to the Council on Trade in Services on April 30, 1996, with a draft "Fourth Protocol in Basic Telecommunications," announcing an implementation date of January 1, 1998. February 15, 1997, was, anyway, the last date in which WTO members could modify or supplement their schedules and lists of Article II exemptions. Furthermore, accompanying the Protocol, the NGBT enacted a "Reference Paper" with a set of regulatory principles.[136] The content and meaning of these provisions will be examined later in this study.

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[133] World Trade Organization. *Agreement on Telecommunications Services (Fourth Protocol to General Agreement on Trade in Services)*, February 15, 1997, 36 I.L.M. 354 (1997), Introductory Note by L. B. Sherman, at 355 [hereinafter Sherman, "Introductory Note"].

[134] *Supra* note 112 at 77.

[135] G. R. Pipe, *supra* note 108 at 22.

[136] L. B. Sherman, *supra* note 133 at 356-357.

B. The International Telecommunication Union

1. The Origins

The ITU is the oldest international organization of the world.[137] Its first moment dates from 1865, when twenty European States created the International Telegraph Union as an attempt to organize the European telegraph network. The membership of this organization continuously grew through the years when more and more States created their telegraph networks and pretended to coordinate them with the European system. When the telephone appeared, this organization started its regulation and even changed its methods of operation.

The appearance of a new technology caused the creation of another international body. In 1903, a group of nine maritime countries tried to apply the radiocommunication technology to safety at sea. The result was an informal body known as the International Radiotelegraph Union created in 1906, which adopted the same conference system.

January 1, 1934 saw the merger of these two organizational bodies into the ITU, due to many countries' pressures for the joint regulation of radio, telegraph and telephone by the same organization. 1947 was an important year for the ITU, as the Atlantic City Conference created a new body, the Administrative Council, for the ITU's relationship with the United Nations. As of this moment, the ITU became a specialized body of the United Nations. Indeed, this Conference had for the first time the additional task of arranging the international frequency list after the Second World War. For this purpose, the organization created the International Frequency Registration Board under the advice of the United Nations.[138]

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[137] For an analysis of the ITU as an organization see generally: G.A. Codding, Jr., "The International Telecommunication Union: 130 Years of Telecommunications Regulation" (1995) 23 Den. J. Int'l L. & Pol'y 501. See *also* A.L. Allison, "Meeting the Challenges of Change: The Reform of the International Telecommunication Union" (1993) Federal Communic. L.J. 491.

[138] *Ibid.* Codding, at 504.

Afterwards, the ITU suffered from the impact of technological revolution occurring within the field of telecommunications. The fast technological changes made the ITU and States to admit that no regulations and organizational structure could be permanent.[139] ITU sustained a series of conferences at intervals until this moment and changed the regulations several times. During all these years and until 1992, the ITU worked with an organization composed by seven bodies,[140] many of them coming from the previous organizations. In the words of one author speaking about the evolvement of the organization by 1990,

> The ITU has evolved from an international body devoted to convincing States to open their borders to international telecommunications, to a global regulator charged with a dual function: increasing the quantum and variety of international telecommunications; and providing the opportunity for more States to acquire and exploit those capabilities.[141]

2. The High Level Committee Report: Recommendations

The last Conferences reforming the ITU deserve focused attention. As a result of a recommendation of the Nice Plenipotentiary Conference in 1989,[142] a High Level Committee [hereinafter the HLC] was composed to study the necessary changes on the ITU structure. This was the result of a period of efforts for the modification of the ITU in order to adapt the

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[139] D.J. Flemming & E. Ducharme, "Technical and Legal Compromise in International Radiocommunication Regulation" in G. Rinaldi Baccelli, ed., *Liber Amicorum Honouring Nicolas Mateesco Matte: Beyond Boundaries* (Paris: Editions A. Pedone, 1989) 75 at 76.

[140] F. Lyall, "The International Telecommunication Union and Space" in V.S. Mani, S. Bhatt & V. Balakista Reddy, eds., *Recent Trends in International Space Law and Policy* (New Delhi: Lancers Books, 1997) 255 at 256. The ancient structure was formed by three bodies that used to meet at intervals, the Plenipotentiary Conference, Administrative Conferences, the Administrative Council, and five permanent organs: the General Secretariat, the International Frequency Registration Board (IFRB), the International Radio Consultative Committee (CCIR), and the International Telegraph and Telephone Consultative Committee (CCITT).

[141] D.J. Flemming & E. Ducharme, *supra* note 139 at 77. Extracted from Art. 4 of 1982 ITU Nairobi Convention, *Purposes*.

organization to the new and fast technological changes and to answer to a new role that the ITU had to assume: the importance in the assistance to developing countries.[143]

In its report on April 26, 1991, the group recommended ninety-six structural alterations of the ITU. The main recommendation of the HLC was the reconfiguration of the organization into three vertical sectors according to the ITU functions: Development, Standardization, and Radiocommunication. Additionally, the Committee proposed the introduction of a body chaired by the Secretary-General, the Strategic Policy and Planning Unit that, together with the Coordination Committee, would help the ITU to constantly study and interpret the new trends in the telecommunications environment and their implications for the organization.[144] With the structure of the long-established Plenipotentiary Conferences and new specific Sector Conferences, the HLC tried to make the ITU more functional and to make better utilization of its resources. In the same direction, the HLC put emphasis on strategic planning and on the roles of the Plenipotentiary Conference and the Council, in order to give them the opportunity to regularly consider broader policy issues.

Another proposal from the Committee was to delete the word "administrative" from the Council's name, in order to reflect the expanded role of this body to political matters and not only to its administrative functions, as it was before.[145]

Finally, the HLC suggested that the ITU cooperate with the *General Agreement on Trade and Tariffs* (GATT), now the World Trade Organization, and other bodies in order to guarantee harmonized terminology and interconnected approaches. This recommendation exemplifies HLC's recognition of the fact that the telecommunications services sector is increasingly subject

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[142] G.A. Codding, Jr., *supra* note 137 at 508.

[143] A. L. Allison, *supra* note 137 at 520.

[144] A.L. Allison, *ibid.* at 524.

[145] *Ibid.* at 526.

to concurrent regulations of other organizations governing international trade, commerce, and competition.[146] The representative case is the current World Trade Organization and its *General Agreement on Trade in Services*, that will be studied below.

3. 1992 Geneva Additional Plenipotentiary Conference: Current Structure of the ITU

After the adoption of some HLC's recommendations, a special Plenipotentiary Conference was convened in Geneva, from 7 to 22 December, 1992, with the purpose of adopting other recommendations directed "to change the structure of the ITU and the manner in which it is governed."[147] This Conference is considered as marking the end of the old ITU, and the beginning of a new organization.

The Conference finished on 22 December, 1992, with two main results. First, this Conference revised comprehensively the Nice Constitution and Convention of 1989 and developed a new Convention and a new Constitution for the ITU. Second, the new norms reflected the adoption of the three-sector structure, as it was proposed by the HLC, in order to give the organization a framework to operate more efficiently.[148]

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[146] *Ibid.* at 536.

[147] ITU, 47th Session of the Administrative Council, *Opening Remarks of the Secretary General, Pekka Tarjanne* (held in Geneva on 29 June 1992), online: ITU <http://www.itu.int/plweb-cgi> (date accessed: 12 July 1999).

[148] ITU/92-27(rev.), 22 December 1992

As a result of this Conference, the structure of the ITU remains with the following composition:[149]

- ✓ The Plenipotentiary Conference
- ✓ The Council
- ✓ The Radiocommunication Sector
- ✓ The Telecommunication Standardization Sector
- ✓ The Telecommunication Development Sector
- ✓ The World Conferences on International Telecommunications
- ✓ The General Secretariat

The Plenipotentiary Conference continues being the supreme authority of the ITU. It meets every four years, instead of every five years as before, and focuses on long-term policy issues.[150] This body is responsible for, among other things, the strategic planning and policy, the adoption of modifications to the Constitution and Convention of the ITU, and all the decisions on internal questions, such as salaries, budget, and elections, of the organization.

The Council is the governing body of the organization between the Plenipotentiary Conferences. As mentioned above, the HLC wanted to expand the functions of this body to include more than administrative functions and, therefore, the word "administrative" was deleted from its name. The Council considers "broad telecommunication policy issues ... in order to ensure that the Union's policies and strategy fully respond to the constantly changing telecommunication environment."[151]

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[149] A. Patterson, *New Space Technology: Regulatory Challenges for the International Telecommunication Union* (LL.M. Thesis, Institute of Air and Space Law, McGill University 1998) [unpublished], at 39ff; see also F. Lyall, *supra* note 140.

[150] See A.L. Allison, *supra* note 137 at 524; and ITU/92-27(rev.), *supra* note 148.

[151] Art. 10.4. (2)- No. 70, ITU Constitution. ITU, *Constitution and Convention of the ITU, Decisions, Resolutions and Recommendations*, Final Acts of the Plenipotentiary Conference of the International

The three new sectors of the organization –Radiocommunication, Standardization, and Development- derive from the reallocation of the previous International Telegraph and Telephone Consultative Committee [hereinafter CCITT] and International Radio Consultative Committee [hereinafter CCIR] functions and represent the new efficient working methods of the ITU. Basically, the three sectors keep a similar organizational structure.

In this sense, all of the CCIR activities relating to the management of the radio-frequency spectrum transfer to the new Radiocommunication Sector. This Sector encompasses two elements: the sector itself and the Radio Regulations Board [hereinafter the RRB], which is the body that substitutes the traditional International Frequency Registration Board [hereinafter the IFRB]. The Radiocommunication Sector is responsible for the rational management of the radio frequency spectrum and registration of radio frequency allocations.[152] Apart from that, the Sector will work through World Radiocommunication Conferences, which will meet every two years with the main purpose of reviewing and revising the Radio Regulations [hereinafter the RRs], Regional Radiocommunication Conferences, the Radiocommunication Bureau [hereinafter the RB], study groups, and the Radiocommunication Advisory Group.

The RRB is constituted as a part-time body, meeting four times a year, as opposed to the permanent nature of its predecessor, the IFRB. In relation to its functions, the RRB keeps fewer functions than the previous IFRB. The IFRB was created with the important role of recording all frequency assignments by States in the International Master Frequency List and providing advice for the best use of the radio spectrum.[153] According to these functions, it developed a very important role and was even able to delete unused frequencies from the Master International

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Telecommunication Union (Kyoto, 1994), Instruments Amending the Constitution and the Convention of the International Telecommunication Union (Geneva, 1992), ITU, Geneva, 1995, ISBN 92-61005521-4.

[152] Art. 12-No. 78, ITU Constitution, *ibid.*

[153] F. Lyall, *supra* note 140 at 263.

Frequency Register. According to the new Constitution and Convention, the new RRB has more limited or definitely less defined functions. It is still the body providing with the last recommendations in cases of procedures of harmful interference after the report from the Director of the RB. However, in the case of dispute, the problem will be referred to a World Radiocommunication Conference.[154] It is the RB which acts as an executive arm of the RRB holding the investigations of harmful interference and registering the frequency assignments.[155] Although the functions of this body are limited after recent modifications, it is still necessary because of the confidence and credibility that the RRB provides to the international radio regulatory system.

Under the recommendation of the HLC, the Conference consolidated all of the ITU's standardization activities into a single Telecommunication Standardization Sector. This was promoted due to some deficiencies that were found on the work of the organization, such as the lack of coordination of the ITU with other standards-setting bodies, overlapping of activities, and the inefficiency of their methods. The new Sector will "study technical, operating, and tariff questions and issue recommendations on them with a view to standardizing telecommunications on a world-wide basis."[156] It comprises of all the standardization functions of the previous CCITT and the CCIR. The Sector structure is similar to the one of the other sectors, with World Standardization Conferences, Study Groups and one Advisory Group.[157]

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[154] Art. 14.2. (a) – No. 95. ITU Constitution, *supra* note 151. According to Prof. Lyall "the old IFRB had a major advisory and conciliatory role in disputes between administrations in respect of proposed and actual assignments." See F. Lyall, *supra* note 140 at 264.

[155] See Arts. 14 ITU Constitution and 10 ITU Convention for the RRB and Arts. 16 ITU Constitution and 12 ITU Convention for the RB, supra note 151.

[156] ITU/92-27(rev.), *supra* note 148. Art. 17.1. (1)- No. 104. ITU Constitution, *supra* note 151.

[157] The only difference with respect to the other sectors is that there is no provision for Regional Standardization Conferences.

The third sector, the new Telecommunication Development Sector, will continue with the original role of the Telecommunications Development Bureau (BDT) created by the 1989 Nice Plenipotentiary Conference. Similarly, this Sector will work through one World Telecommunication Development Conference and one Regional Telecommunication Development Conference that will meet in the four-year period between Plenipotentiary Conferences, comprising as well of Development Study Groups, which replace previous CCITT study groups, and a Telecommunication Development Advisory Group. Basically, what the Geneva Plenipotentiary Conference does is to strengthen the role of the organization in stimulating telecommunication development. The goal of this sector's conferences is more directed towards general policies. The conferences adopt recommendations, resolutions, and reports, but not final acts.

Finally, the last important body is the World Conferences on International Telecommunications which substitute the World Administrative Telegraph and Telephone Conference [hereinafter WATTC]. The role of this body is the enactment and revision of the International Telecommunication Regulations [hereinafter ITRs]. The ITRs now in force were adopted in the 1988 WATTC in Melbourne. The purpose of these regulations is the establishment of general principles regarding the provision and operation of international telecommunication services and regarding as well the telecommunication transport means used.[158] These regulations complement the ITU Convention and Constitution and apply to every mean of transport as far as they do not contravene the Radio Regulations.[159]

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[158] ITU, *International Telecommunications Regulations*, Final Acts of the World Administrative Telegraph and Telephone Conference, Melbourne, 1988 (Geneva, 1989, ISBN 92-61-03921-9) [hereinafter ITR].

[159] *Ibid.* Art. 1.8.

4. Kyoto and Minneapolis: Last Conferences

The 14th Plenipotentiary Conference of the ITU met in Kyoto, Japan, from September 19th through October 14th, 1994. The most important decision in the Plenipotentiary Conference of 1994 was the adoption of the first Strategic Plan, for the period of 1995-1999, which sets the goals and priorities of the ITU. The Kyoto Conference was also characterized for a transfer to a more policy-oriented approach, taking into account the predominant technical role in the past. The creation of a new mechanism, the World Telecommunication Policy Forum, shows this approach. This body was established to discuss global telecommunication policy issues with the participation of private sectors and administrations.[160] Apart from that, the Plenipotentiary Conference elected a new Council and the first nine members of the RRB.

The last Plenipotentiary Conference did not represent a very important structural change for the organization. The Minneapolis Conference, from 12 October to 6 November, 1998, had as its main goal to accomplish the end of the reform process that the 1989 Nice Plenipotentiary Conference started. The two principal objectives of this conference were to establish the ITU's general policies and the Strategic Plan for the period 1999-2003 and to continue the work started by the 1992 Geneva Conference, amending the instruments of the organization to give greater rights and obligations to the ITU's private sector members.[161] The Conference also elected the Secretary-General, Directors of the sectors, and members of the Council as well as the RRB.[162] The next Plenipotentiary Conference is scheduled for the year 2002 in Morocco.

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[160] Report of the Kyoto Plenipotentiary Conference: Main Highlights, ITU/94-19, 14 October 1994.

[161] D.J. MacLean, "Open Doors and Open Questions: Interpreting the Results of the 1998 ITU Minneapolis Plenipotentiary Conference" (1999) 23 Telecom. Pol'y 147.

[162] ITU, *Press Report on the Minneapolis Plenipotentiary Conference: Main Highlights* (1998) ITU Press & Public Information Service, online: ITU <http://www.itu.int/newsroom/press/P...sRel-Features/PP98press_report.html>. This composition will remain until the year 2002. The only structural modification is the introduction of a new provision on the ITU Constitution modifying the number of

5. ITU's Jurisdiction: Does the Organization Have Control?

Reference has been made in Chapter One to the process of allocation, allotment, and assignment in the attribution of frequencies and orbital positions by the ITU. What needs to be emphasized at this point is the predominant role of administrations in this process of attribution of frequencies. It is the concerned administration which chooses and assigns a particular orbital position/frequency to its radio stations, as it deems convenient for the administration's interests.[163] Besides that, the ITU Constitution and Convention, as well as the Radio Regulations [hereinafter RR], only ask for international cooperation in order to avoid harmful interference among systems. In this respect, Article S4 of the Radio Regulations requires Member States "to avoid causing harmful interference to services rendered by stations using frequencies assigned in accordance with the Table of Frequency Allocations."[164]

Taking this point of departure into account, the main role of the ITU is the process of notification, registration, and possible coordination, in cases where the problem of harmful interference might occur. The phase of registration of the orbital position/frequency is essential because the international rights of administrations with respect to their frequency assignments are derived "from the recording of those assignments in the Master International Frequency Register [hereinafter the Master Register]."[165] In this respect, the most important provisions of the RRs are Article S9, related to the coordination between administrations when necessary, and Article

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members of the Radio Regulations Board. From now on, they will be twelve members or not more than the 6% of the total member of Member States.

[163] R.S. Jakhu, "International Regulation of Satellite Telecommunications" in K. Tatsuzawa, ed., *Legal Aspects of Space Commercialization* (Japan: CPS Japan Inc., 1992) 78 at 84.

[164] Art. S4.3 RRs, see *supra* note 6.

[165] *Ibid.* Arts. S8.1 and S8.3 RRs.

S11, which refers to the notification of assignments to the RRB, for the purpose of registration in the Master Register.

The first step, before the coordination process or the pure notification to the ITU, is for the administration to send a general description of the planned system to the RB for the purpose of an advance publication in the Weekly Circular.[166] The purpose of this advance publication is to give other administrations the possibility of looking at the information and communicating with the publishing administration within four months if they think there is a risk of interference.[167]

The process of coordination is regulated in Article S9 of the RRs. As presented, it is more a bilateral negotiation between administrations than an ITU process. If, after the publication of the Weekly Circular, any administration observes that its systems could be affected by the new one which tries to be established, this administration will send its comments to the publishing administration. Afterwards, both of the administrations will try "to cooperate in joint efforts to resolve any difficulties, with the assistance of the [Radiocommunication] Bureau, if so requested."[168] Therefore, the intervention of the Bureau is not automatic. It is informed of the problem by the administrations and will participate if this is requested by either of the parties.

Article S9 regulates the cases of request for coordination. Basically, there are certain cases in which coordination is compelled by the RRs.[169] Generally, and depending on the case, when requesting coordination, the publishing administration sends the information to the requested administration and to the Bureau. The Bureau assists the publishing administration if it

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[166] *Ibid.* Art. S9.1 RRs. The Bureau will publish the information within three months. Art. S9.2B. For information about all the steps and details of these procedures, go to the RRs. The purpose of this study is just to illustrate the general characteristics of the ITU procedures.

[167] Art. S9.3 RRs.

[168] Art. S9.5B RRs.

[169] Art. S9.7 RRs.

needs assistance and also can send the request for coordination to the concerned administration.[170] The Bureau can even determine the need for coordination, in cases that an administration requests its help. On these cases, the Bureau will study the information and will inform both administrations.[171] However, the bottom line is that if, after all the consultations between the administrations and after the Bureau recommendations the disagreement remains unresolved, "the administration which requested coordination shall ... defer the submission of its notice of frequency assignments ... for six months."[172] Therefore, the Bureau does not have much authority. At the end, the traditional principle of "first come, first served" rules the problem, and the administration which registered its system first has no legal obligation to coordinate.[173]

Article S11 of the RRs refers to the notification and registration of frequency assignments. Not all frequency assignments have to be notified to the ITU. The RRs establish the cases in which notification will be made[174] and they are mainly:

(i) if the use of that frequency could cause harmful interference;

(ii) if the frequency wants to be used for international radiocommunications;

(iii) if that particular assignment is being subject to the coordination procedure;

(iv) if the assignment wants to obtain international protection;

Once the administration sends the notice to the Bureau, this body will examine its conformity with the relevant provisions of the Constitution, Convention, and RRs, with the Table of Frequency Allocations, with the coordination procedures with other administrations, with the

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[170] Art. S9.33 RRs.

[171] Art. S9.52A RRs.

[172] Art. S9.64 RRs.

[173] See also R.S. Jakhu, *supra* note 163 at 86.

[174] Arts. S11.2 to S11.8 RRs.

probability of causing harmful interference, and with a world or regional allotment plan.[175] If this examination leads to a favourable finding, it will be registered in the Master Register. If the Bureau finds the information unfavorable with the Table of Frequency Allocations, the assignment will be recorded "for information purposes" if the administration undertakes that it will not cause any harmful interference.[176] In the rest of the cases, the notice will be returned to the administration, recommending the action to be followed. However, if the administration resubmit the notice, it will be recorded provisionally, and changed to definitive if the administration demonstrates that the assignment was in use during four months without receiving any complaint of harmful interference.[177] In other cases, the assignment will be registered with a symbol indicating that it will not cause harmful interference to previous assignments. Finally, if harmful interference is anyway caused in these latter cases, the RRs only indicates that the administration will "immediately eliminate this harmful interference."[178]

Leaving aside the more serious cases of settlement of disputes between States, Article S15 of the RRs will be applicable in cases of harmful interference. In this section, the lack of actions by the RB is also observable. The basic idea is the encouragement of the "utmost goodwill and mutual assistance" of Member States.[179] The Radio Regulations just establish that all countries shall cooperate with all means for the good solution of these problems. Subsequently, the Bureau will only intervene in case an administration requires its service. However, the only actions that the Bureau is supposed to adopt are the request for cooperation of

[175] Arts. S11.30 to S11.34 RRs.

[176] Art. S11.36 RRs.

[177] Art. S11.41 RRs.

[178] Art. S11.42 RRs.

[179] Art. S15.22 RRs.

the concerned administrations, the analysis of the situation, and the adoption of conclusions with a recommended action which it will send to the parties involved.[180]

Taking this timid intervention of the RB into account, it is not strange to witness a lack of confidence on the ITU as organization. This is the main argument of many scholars when they criticize the role of the ITU in modern telecommunications. For instance, according to one scholar

> the ITU has no mandatory jurisdiction over telecommunication disputes. Nor can it enforce its findings that an unauthorized use of the radiomagnetic frequency spectrum interferes with an authorized use.[181]

Therefore, the reason for States to follow ITU procedures is more due to their national interest than the binding character of ITU decisions. However, even if States usually follow its decisions or recommendations, the increasing demand of frequencies provokes at the moment that few communications systems can operate without interference problems. Therefore, the ITU criteria are more and more important to follow.

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[180] Art. S15.43-46 RRs.

[181] R. Bender, *supra* note 8 at 38.

Chapter Three - Frequency Allocation Management

An issue that deserves separate consideration is the problems that frequency allocation and orbital congestion are causing the ITU. The ITU's coordination procedures have been abused these last years due to the increase of demands and competition among applicants. There are ITU rules trying to assure that the limited resources, that is, orbits and frequencies, are distributed fairly. One of them is the request to countries to limit their demands of slots and frequencies to the minimum to provide necessary services.[182] However, the problem is that the ITU is not a supranational organization. It is just an international organization which cannot enforce its regulations over the sovereign States which form part of it.[183]

The problem of orbital congestion affects particularly the geostationary orbit. However, this is not because the orbit is very limited, but because all communications systems want to use the same frequency bands. These bands are the C band (6 GHz uplink- 4GHz downlink) and the Ku band (14 GHz-11/12 GHz).[184]

The main issue related to this orbital congestion is the usually called "paper satellites," referred to satellite networks which exist in paper but not in reality.[185] In many of these cases,

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[182] Art. 44.1 ITU Constitution, *supra* note 151, "Members shall endeavour to limit the number of frequencies and the spectrum used to the minimum essential to provide in a satisfactory manner the necessary services."

[183] L. Manuta, "Orbital Contention: International Telecommunications Union Assigns Orbital Slots Rules For Geosynchronous Satellites" *Satellite Communications* 18:1 (1994) 32.

[184] G.C. Staple, "The New World Satellite Order: A Report from Geneva" (1986) 80 Am. J. Int'l Law 699 at 705.

[185] F. Lyall, "Paralysis by Phantom: Problems of the ITU Filing Procedures" (1996) Proceedings of the Thirty-Ninth Colloquium on the Law of Outer Space, International Institute of Space Law 187.

the system exists only in a project form, or not even that, and the only intention is to freeze the rights over the precious resources.

Dealing with these problems, the ITU created a Special Committee on Regulatory/Procedural Matters in 1995. This group worked during two years and presented its Final Report in February 1997[186] with the outlook focused in the next WRC at 1997.

A. Orbital Congestion: Is Tonga an Exception?

Among all the issues that exist concerning the orbits' and frequencies' management, perhaps the most important is the orbital congestion. The Regulatory Panel at Satellite 99 Conference at the beginning of 1999 identified the allocation of satellite real estate as one of the top issues for 1999.[187]

The Asia-Pacific region faces particular problems. In the Satel Conseil Symposium, celebrated in Paris in 1996, the president of Asia-Pacific Satellite Communications Council, Seon Jong Chung, expressed that there are 250 filings for C-/Ku band slots in this region. However, only 35 slots are available. And the problem is that there is no way to find out which ones are serious projects and which are paper satellites, because the ITU has no efficient procedure for that.[188]

The widely known example of Tonga was the first case to manifest this problem. In 1990, the State of Tonga applied to the ITU for sixteen orbital slots, acquiring at the end six

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[186] ITU, Special Committee on Regulatory/Procedural Matters Devoted to Resolution 18 (Kyoto, 1994), *Report of the Special Committee to the Director of the Radiocommunication Bureau*, ITU Doc. SC97-2/14(Rev.1)-E, (11 February 1997) [hereinafter, Report].

[187] "Export Licensing and Orbital Slots Top Satellite Issues for 1999" *Satellite Week* (8 February 1999), online: LEXIS-NEXIS (News).

[188] "Divergent Views Remain on How to Solve 'Paper' Satellite Problems" *Satellite Week* (9 September 1996), online: LEXIS-NEXIS (News).

positions. Tongasat, or Friendly Islands Satellite Communications, Ltd., was behind this application. After acquiring these slots, Tongasat rented one of them to Unicom, an American company, and auctioned the rest of the slots for $2 million per year.[189] Another company, Rimsat, leased as well one of Tongasat's slots. Immediately, INTELSAT denounced this practice to the ITU as an "attempt to convert the ITU registration process into an opportunity for financial speculation in the geostationary orbit" and as a violation of the ITU regulations.[190] On the other hand, Tongasat did not even hide its purposes of leasing, selling, or trading these resources and admitted that these slots exceeded its needs.

However, other countries are not free from similar accusations. Even if the U.S. tried to boycott the operation of satellites using Tongasat slots in the U.S. territory, Rimsat also accused the U.S. of warehousing. According to Rimsat, from the 109 advance publications that the U.S. made with the ITU in 1993, almost half of them are not for seriously planned systems.[191]

The Asia-Pacific region has particularly experienced this congestion in the last years. The economic explosion of these countries attracted many investors and this expansion created a demand for new satellite based services able to connect the region. It is in this rationale that many regional satellites have been launched and that a need for cooperation surged. In 1993, Tonga and Indonesia decided to share the 134 degrees East slot where Tongastar 1 and Palapa Pacific-1 were operating.[192] More recently, in 1997, Tonga accused Indonesia of intentionally

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[189] J.C. Thompson, "Space For Rent: the International Telecommunication Union, Space Law, and Orbit/Spectrum Leasing" (1996) 62-1 J. Air L. & Com. 279 at 281ff.

[190] Opposition letter sent to the ITU by Dean Burch, Intelsat's Director General: "Intelsat Accuses Tongasat of Financial Speculation in Orbit" *Satellite Communications* 14 (1990) 8, online: LEXIS-NEXIS (News). Intelsat could not follow its arbitration procedures with Tonga because Tonga is not a member of the organization, Manuta, *supra* note 183.

[191] Manuta, *supra* note 183.

[192] D.J. Jessop, "Spanning the Pacific: Asia's Demand for Satellite Transmission Services" *Satellite Communications* 18:1 (1994) 26, online: LEXIS-NEXIS (News).

interfering with its transmissions from this slot that, according to Tonga, was from Tongasat. Answering to that accusation, the Indonesian operator, Pacifik Satellite Nusantara (PSN), argued that this particular slot was under a coordination procedure in the ITU between Tonga and Indonesia.[193]

The last episode headed by Tonga occurred in 1998 when the State announced it wanted to create an Asian satellite consortium with a group of Asian companies in order to serve the Asia-Pacific region. Tonga's intention is to use the unoccupied slots that it still holds and that should be returned soon to the ITU at the end of the since 1997[194] seven year period.[195]

The slots scarcity and the controversy that it provokes emerged once more in 1998 when INTELSAT announced its intention of "deregistering" eight orbital slot registrations with the ITU in order to "set an example [for] efficient use of scarce orbital resources." These slots were registered by INTELSAT and never used. Although, according to INTELSAT, this was motivated by an effort of improving orbit uses, the reactions from outsiders were quite different. For example, PanAmsat declared that the returned slots were anyway completely unusable and

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[193] "Tonga Accuses Indonesia of Jamming Satellite Signals" *Satellite News* 20:9 (1997), online: LEXIS-NEXIS (News).

[194] As will be explained below, the nine year period to bring a satellite into business since the moment of the notification has been reduced to seven years by the WRC-97. This provision is established in Art. S11.44 RRs, *supra* note 6.

[195] "Tongasat Set To Lead Asian Satellite Consortium: Multinational Group To Use Tongan Orbital Slots" *Satellite News* 21:3 (19 January 1998), online: LEXIS-NEXIS (News). When introducing the project, Tongasat's managing director, Sione Kite, said that Tonga was upset about the recent accusations against this country of being involved in paper satellite cases, and that they were trying to get away from these allegations. In the same sense, it supported all the efforts coming from the ITU trying to resolve this problem of paper satellites.

Communications Center, a satellite consulting firm, talked about other possible reasons for this action, such as the costs of holding unused orbital locations.[196]

INTELSAT's statistics[197] about efficient use of the spectrum are evidence that the paper satellite problem is very wide spread. INTELSAT presented the following data about the most used C- and Ku bands in 1998:

	SLOTS REGISTERED	SLOTS USED
INTELSAT	25	19
UNITED STATES	74	36
FRANCE	9	2
RUSSIA	58	25
EUTELSAT	18	6
LUXEMBOURG	9	2
INTERSPUTNIK	18	1

The WRC-97 illustrated another current important problem, that is, the spectrum sharing between GSO and non-GSO systems mentioned above and the battle between the competitors Teledesic and Skybridge. Traditionally, the ITU had a provision imposing to non-GSO systems the obligation of non-interference with GSO systems. The WARC held in Malaga-Torremolinos in 1992 established Resolution 46, which implements a coordination procedure between these two sorts of systems. The principal achievement of this resolution is that it terminates the primacy of GSO systems. However, these non-GSO systems are new projects and they are finding it difficult to coordinate with existing GSO satellite operators. Subsequently, WRC-97 recognized for the first time that the spectrum resource must be shared between the already established GSO systems and the new non-GSO ones.[198]

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[196] "Intelsat Will Return 8 Orbital Slots to ITU" *Satellite Week* (14 December 1998), online: LEXIS-NEXIS (News).

[197] *Ibid.* at 1.

[198] P.L. Spector, *supra* note 47.

Regarding the dispute between Teledesic and Skybridge, Skybridge has the additional difficulty of trying to develop a system of 64 LEO satellites in the heavily used Ku-band. As of November 1997, 185 commercial GSO operators occupied this band.[199] Having no other choice, Skybridge insisted on the principle of sharing on the WRC-97. On the other hand, GSO operators had spent a lot of money on their Ku-band systems and they were concerned that an agreement about sharing the spectrum imposed by the WRC-97 could cause harmful interference to their systems.[200] At the end, the WRC-97 established the principle of sharing and guaranteed certain rights of interference to Skybridge. For the American operator, Teledesic, it had a different approach to the spectrum problem because it was proposing a system of 288 satellites in Low Earth Orbit, and the WRC-97 confirmed to the company certain frequency bands without having to coordinate with GSO systems.[201]

At the moment, Skybridge is experiencing the difficulties at the internal level, in the U.S., where the Federal Communications Commission is deciding whether or not to give non-geostationary systems, such as Skybridge, access to the Ku-band spectrum.[202]

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[199] *Ibid.* at 100.

[200] *Ibid.* at 102.

[201] *Ibid.* at 104. The WRC-95 attributed spectrum of 400 MHz in the Ka-band and this was expanded to 500 MHz in the WRC-97. The Ku-band, where Skybridge and other systems want to operate, is one of the most used bands of the spectrum, but it offers the possibility of using wide waves ensuring a reliable reception. On the contrary, the Ka-band, although is less congested, presents technical problems to operators, such as rain interference and less reliability due to its shorter waves. See "Skybridge Gains Support in Rulemaking to Spur Spectrum Sharing" *Satellite News* 22:13 (29 March 1999), online: LEXIS-NEXIS (News).

[202] *Ibid.* "Skybridge..."

B. Problems in the Current Procedure of Frequency Attribution

The present system of orbit and spectrum allocation was determined in the 1985 and 1988 World Administrative Radio Conference [hereinafter the WARC Conferences][203] which focused on guaranteeing equitable access to these resources. For the first time, this Conference guaranteed at least one orbital position and the correspondent set of frequencies to every country.[204] The next WARC was in 1992 and focused on the allocation of frequencies to systems that do not use the GSO, that is, primarily, LEOs. Later, the 1995 WRC [after the restructure of the ITU, the WARC are substituted by the World Radiocommunication Conferences] continued with this topic but it did not address the problems that Tonga illustrated.[205]

The system established in the WARC Conferences did not incorporate any limitation of time for States occupying slots. Neither did it require the nations to be prepared to exploit these slots and to use them.[206]

As mentioned above, the bringing into practice of a satellite network encompasses three important moments in the ITU's regime: allocation, allotment, and assignment.[207] The term allocation refers to the entry by a competent ITU conference of a particular frequency band for its use by one radiocommunication use in the Table of Frequency Allocations. The important

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[203] The World Administrative Radio Conferences are the antecessor of the World Radiocommunication Conferences which were established in 1992 Geneva Additional Plenipotentiary Conference.

[204] *Ibid.* at 700. s. 3.3.1 (a) of the Final Act indicates that "the planning shall consist of ...(a) an allotment plan that shall permit each administration to satisfy requirements for national services from at least one orbital position, within a predetermined arc and predetermined band(s)." Conference Document 324 (Rev.1), 15 September 1985, cited by D. Riddick, "Why Does Tonga Own Outer Space?" (1994) XIX:1 Air & Sp. Law 15 at 18.

[205] J. C. Thompson, *supra* note 189 at 295ff.

[206] Riddick, *supra* note 204 at 19.

principle that determines the frequency attribution process is the rule of avoidance of harmful interference contained in Article 45 of the ITU Constitution.[208] According to this principle, any applicant of a radio frequency and orbital position must avoid any harmful interference with previous registered networks. This rule is called the "first come, first served" theory.

Aside for some exceptions,[209] the frequency bands and orbital positions are attributed to States under a principle of priority. Consequently, the State which notifies its intention of starting a satellite service from a particular orbital position and using certain frequencies shall be protected against the harmful interference of late comers. The notification to the ITU is what grants the international recognition and protection of this right.

When analyzing the process of frequency attribution, the RRs make reference to three phases: coordination, notification and registration of the frequency band.[210] Previous to any step is the advance publication. As mentioned before, the operator contacts with its ITU member administration and this one provides the Radiocommunication Bureau [hereinafter RB] with the information about this system to be published in the ITU's weekly bulletin. In the traditional procedure, the information had to be supplied nine years before the proposed beginning of the

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[207] This part is complementary of previous sections. See Chapter One: s. A. Technical Presentation for a basic explanation of these three steps in the process of attribution of frequencies to the States.

[208] Art. 45 ITU Constitution, *supra* note 151. "All stations, whatever their purpose, must be established and operated in such a manner as not to cause harmful interference to the radio services or communications of other Members or of recognized operating agencies, or of other duly authorized operating agencies which carry on a radio service, and which operate in accordance with the provisions of the Radio Regulations."

[209] Certain frequency bands are regulated by "a priori" plans, that is, they are already distributed and all countries have at least one guaranteed position. In particular, this system affects broadcasting satellites operating in the 12 GHz Band and Fixed Satellite Services in 6/4, 14/11 and 17/18 GHz bands. The rest of the frequency spectrum is under the "first come, first served" regime. See R.S. Jakhu, *supra* note 163 at 88.

[210] See Chapter Two, s. B (5), to understand how the process of coordination, notification and registration of frequencies with the ITU work. See also *ibid.* R.S. Jakhu; and also H. Wong, "The Paper 'Satellite' Chase: the ITU Prepares for its Final Exam in Resolution 18" (1998) 63:4 J. Air L. & Com. 849 at 862ff.

service. Then, if there is any problem of interference, the coordination phase starts between the concerned countries, continuing with the notification to the RB and final registration in the Master International Frequency Register if there are no obstacles.

Since some years ago, some problems had been identified in the existing procedure. First, the period of notification before the beginning into practice of the system was too long. As commented before, the satellite operator had nine years to put the system into practice and this blocks late comers who have to wait and coordinate with the first operator.

An additional problem is that there was not any financial penalty or sanction for the operator that does not launch the satellite after this long period. Moreover, during the previous period of nine years, the ITU's supervision was zero. The operator did not have to report how its project was going and that allowed it with a big freedom towards the ITU.

This regulation and the increasing demand for the establishment of satellite networks and the consequent race for orbital positions are what have caused the abuse of the system usually called the "paper satellite" problem. In order to have priority over these resources States started notifying and registering more positions and frequencies than they needed, creating an obligation of coordination for other countries.

C. Special Committee on Regulatory/Procedural Matters Devoted to Resolution 18 (Kyoto, 1994)

The Kyoto Conference in 1994 illustrated the existing problems in the current regime for international coordination of satellite networks. Specifically, it enacted Resolution 18 promoting the review of some issues concerning international satellite network coordination.[211]

[211] ITU. *Review of the ITU's Frequency Coordination and Planning Framework for Satellite Networks*, ITU Res. 18, supra note 208 at 135.

Consequently, the Radiocommunication Assembly established a Special Committee on Regulatory/Procedural Matters in 1995. This group ended up in a Final Report in 1997.[212] This document analyzes some problems of the satellite coordination system mainly focusing on the growing congestion in the use of orbit/spectrum resources. There are a number of related issues that lead to the same conclusion: inefficiency in the satellite coordination process.

1. Illustration of the problem

The Special Committee [hereinafter the SC] identifies several sorts of problems. On the one hand, the number of filings under the RRB is astronomical. ITU Administrations file for many more orbital positions than needed and this presents a problem to determine which satellite or system is really going to be placed in service.[213] Additionally, the Report mentions the huge paper flow sent to the ITU and the complexity of the filings.

An independent but connected problem for the SC is the case of "paper satellites." According to the SC, this results from several reasons. The "first come, first served" regime causes a race for States that claim for these resources in order to have first the right to exploit them. Another motive is the fact that there are no financial charges for filing and no penalty if, at the end, the system is not established.

Another kind of problem relates to the failures in the coordination process itself handled by the RRB, due to the incomplete information provided by States.

The Report makes as well some comments on the operational life of satellites. But no suggestions were made in this report, due to the practical difficulties. There is a general agreement that no satellite system should remain permanent in an orbital position, because that

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[212] Report, *supra* note 186.

[213] Report, *ibid.* at 8.

would look like the acquisition of a property right. In this sense, it is important to remember that the 1967 Outer Space Treaty [hereinafter the OST] and other international agreements declare as the first and most important rule the freedom of the outer space and the prohibition of national appropriation.[214]

However, the current practice shows that at the end of a complex satellite network, the system is usually replaced by another more advanced satellite and the operator has a quasi-eternal right over this position. This act is akin to providing the operator with a "right" to use this orbital position eternally, if it replaces the dead satellites by some with more or less the same technical characteristics.[215]

Therefore, the non-appropriation principle of Article II of the OST affects the whole outer space including the geostationary orbit, and the question is whether the permanent use of orbital slots constitutes an appropriation of outer space or not. According to some scholars, it is not clear that there is an appropriation of outer space in these cases. First, because the location of a satellite in space changes constantly due to its motion, so the element of permanency is not so obvious. Second, neither does the element of exclusivity in the possession of the slot exist, because several satellites can operate from the same slot, using different frequency bands.[216]

The SC considers other practices relating to orbital resources. If an administration gets almost a right to use an orbital position eternally, should the transfer of orbital positions be allowed? In this respect, the general view of administrations is that it should not. However, the Radio Regulations do not have any mechanism to avoid this practice, and there are no

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[214] *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies*, *supra* note 1 Arts. I and II.

[215] R. Jakhu, *supra* note 163.

recommendations on this point. Indeed, many scholars think that warehousing and leasing of orbital positions violates the spirit of the ITU instruments and furthermore, the OST. According to some authors, these practices could be considered as a violation of the concepts of equitable access and efficiency identified in the ITU Convention.[217] Particularly, Article I and II of the OST are important in this respect. Some scholars consider the principles of space as the "province of all mankind" and the prohibition of appropriation should prevent the trade of these resources. The argument is that if no country can claim any right of sovereignty over a slot, how can it sell or lease the same slot?[218]

During the WARC Conferences, several states proposed the imposition of time limits on the possession of slots. However, a time limitation does not modify the nature of the possession over the slot, that is, if the sovereign right over an orbital position violates the OST, it does it in any case even if it is limited on time.[219]

Finally, neither are there suggestions about how to deal with the possible practice of "administration of convenience," which relates to the possibility of an operator choosing an administration with which it does not have a relationship, in order to carry all the procedures of the ITU. This is seen as a possible factor that can weaken the relationship with the responsible administration, and is analogous to the traditional "flags of convenience" shipping.[220]

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[216] M.L. Smith, "The Role of the ITU in the Development of Space Law" (1992) XVII-1 Ann. Air & Sp. L. 157 at 165ff.

[217] J. C. Thompson, *supra* note 189 at 299. The principles of equitable access and efficiency are defined in Art. 44.2 ITU Constitution, *supra* note 151, "In using frequency bands for radio services, Members shall bear in mind that radio frequencies and the geostationary-satellite orbit are limited natural resources and that they must be used rationally, efficiently and economically..."

[218] *Ibid.* at 303ff.

[219] Report, *supra* note 186 at 24.

[220] Report, *ibid.* at 31.

Therefore, all these practical problems lead to one conclusion: the failure of the ITU regulations to prevent certain practices which were unforeseeable in the past and the beginning of the gradual introduction of trade principles in ITU mechanisms that were supposed to be only technical.

2. Recommendations of the SC

Of particular interest is Recommendation No. 2:

> **The period between the submission of the API** [advance publication] **and the date of bringing into use should be reduced and the right of extension should be limited.**

As commented before, the previous period between the beginning of the procedure with the advanced publication and the permissible moment of entry into practice of the system was nine years. The SC recommends the reduction from the six years prior to entry into service to a maximum period of five years. According to the SC, a shorter period would force the operators to be more realistic in their applications. Equally important, it suggests the reduction of the right to an extension, that was three years, to two years, and the restraint of this extension to specific reasons. Therefore, the total period should not be more than seven years.

Those reasons for an extension of the period should be determined in the RRs as clear as possible. The report recommends as causes: launch failures, launch delays, delays caused by design problems in the satellite, other specific circumstances, and *force majeure*.[221]

Recommendation No. 3 is also relevant of mention:

> **Administrative due diligence should be adopted as a means of addressing the problem of reservation of capacity without actual use. Any due diligence approach**

[221] Report, *ibid.* at 19.

should apply ... to any satellite network being coordinated and to satellite networks notified in the MIFR [Master International Frequency Register].

The SC identifies and explains two kinds of "due diligence." *Administrative due diligence* is the requirement for each administration to provide evidence of its serious intention of establishing a satellite network. This measure is integrated by national actions in order to reduce "paper satellites" and the provision of this information to the RB. Regarding the information that should be provided, the SC only suggests the necessary information needed in order to demonstrate a serious intent. It does not request, for example, financial information about the system.[222]

Introducing this measure, the practical consequence would be, according to the SC, that the applicants who do not submit the established information would lose their priority towards later comers, and would not be taken into account in the coordination process.

The second class of due diligence studied by the SC is the *financial due diligence*. Three sorts of measures are mentioned:

- A "filing fee" to cover the ITU's processing costs for proposed satellite networks;
- A deposit amount, which would be returned to the applicant once the system enters into service;
- An annual registration fee for satellite system recorded in the MIFR.

The SC recommends the WRC-97 to adopt the administrative due diligence and to consider more extensively the financial due diligence, which could even need a revision of the Constitution and the Convention of the ITU. Indeed, due to the lack of consensus about the

[222] *Ibid.* at 21. The minimum information that the spacecraft manufacturer should provide is its name; the name of the satellite operator; the contractual date of delivery; and the number of satellites to be launched. On the other hand, the information to be provided by the launch vehicle provider is its name; the name of the customer; and the contractual launch date.

financial due diligence, the intention was to consider its introduction in 1999 if the administrative due diligence does not produce effective results.[223]

D. Administrative Due Diligence and Cost Recovery

These recommendations were studied in the next WRC-97. The financial due diligence measures were not considered by the conference even if several delegates expressed their intention of bringing this topic in the next ITU Plenipotentiary Conference.[224] At the conference, some countries, such as Australia, Europe, and Japan, tried to introduce the requirement of financial deposits or other sorts of fees. Particularly, Australia made a suggestion of requiring a deposit of $5 million.[225] However, it was not adopted due mainly to the opposition of the U.S. The U.S. itself was reserving more orbital positions than, according to many countries, it would use.[226]

The Conference adopts two main measures, namely, the reduction of the time for bringing a satellite into use and the administrative due diligence procedure to be applied since 22 November 1997. The time now is of five years generally and two years in case of extension, establishing the circumstances.[227] Indeed, it establishes that if the completed information is not provided to the Bureau on the specified date, the annotation will be canceled. With the new rules,

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[223] See also, "Q&A: Making Space in Space: Proposals for a More Efficient Use of the Available Frequency Spectrum" *ITU Newsroom* (1997), online: ITU< http://www.itu.int/plweb-cgi/fastwe...ached%20at%20WRC%2097.Dec.%203.1997>.

[224] ITU, Press Release 97/20, "Major Agreements Reached at WRC 97" (21 November 1997).

[225] "U.S. Challenges French Proposal to Repeal WRC-95 Victory" *Satellite Week* (22 September 1997), online: LEXIS-NEXIS (News).

[226] "Satellite Spectrum-Sharing Plan Approved by ITU Over Light Opposition" *Satellite Week* (24 November 1997), online: LEXIS-NEXIS (News).

[227] Art. S11.44 RRs, *supra* note 6.

for example, specified information will have to be provided to the ITU before launching or within the first 5 years of filing.[228] Concerning the type of systems affected for this administrative diligence, the Resolution mentions fixed, mobile, and broadcasting satellite systems. In 1998 the RB published a letter for all Member States with a form to fill in order to comply with the administrative due diligence provisions. Furthermore, it gives instructions for administrations to cover the relevant data.[229]

An orientation that the ITU is following is the implementation of processing charges for satellite filings. This measure is a market mechanism in line with the "user-pay" principle, that is, in order to cover administrative expenses. The ITU will be able to start with this measure due to the increase of participation of the private sector, which is linked to greater financial obligations. The idea is not to put a bigger burden in the Member States.

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[228] ITU, *Administrative Due Diligence Applicable to Some Satellite Communication Services*, ITU Res. 49, Annex 2, World Radiocommunications Conference (1997) establishes the information to provide:

(A) **Identity of the satellite network**: (a) Identity of the satellite network; (b) Name of the Administration; (c) Country symbol; (d) Reference to the advance publication information ...; (e) Reference to the request for coordination; (f) Frequency band(s); (g) Name of the operator; (h) Name of the satellite; (i) Orbital Characteristics.

(B) **Spacecraft Manufacturer**: (a) Name of the spacecraft manufacturer; (b) Date of execution of the contract; (c) Contractual "delivery window" [planned period, beginning and end dates]; (d) Number of satellites procured.

(C) **Launch Services provider**: (a) Name of the launch vehicle provider; (b) Date of execution of the contract; (c) Anticipated launch or in-orbit delivery window; (d) Name of the launch facility; (e) Name and location of the launch facility.

[229] ITU, Radiocommunication Bureau, *Forms for use when submitting the administrative due diligence information to the Radiocommunication Bureau*, ITU Circular Letter CR/96, Forms RS49 (1998). This document specifies more the required information indicated above. For example, relating to the information of the satellite network, it requires some technical information, such as the nominal orbital longitude, the inclination angle, the apogee, perigee, the number of satellites, and the number of orbital planes. As well, relating the launch services provider, it specifies the name of the locality by which the launch facility is known or in which it is located, the country, and the geographical coordinates.

In this sense, the 1998 Minneapolis Conference instructed the Council to implement, as soon as possible after its meeting in 1999, processing charges for all satellite filings received in ITU since November 7, 1998, in order to receive payments since the World Radiocommunication Conference of 2000.[230] What the Council has done in its 1999 session is to establish a schedule of fees for various classes of satellites network filings, according to the Council, for their requirement of an additional registrar function.[231]

ITU's goal with these two measures, administrative due diligence and cost-recovery, is to put overfilling under control without imposing more vigorous actions, such as the financial due diligence. However, there is yet no limitation on the period of use of slots by the countries. Once the States benefit from a particular orbital position, their use of this resource may be practically perpetual.

E. Putting a Price to the Spectrum: Introduction of Market Principles

The ITU suffers a clear lack of strong enforcement powers. However, not all scholars and countries desire the same power vested in this organization. According to some authors, the solutions to the problem of orbits' warehousing and trafficking must come from outside the ITU. Countries must find a sort of implicit or customary rule to boycott countries which perform these

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[230] ITU, *Implementation of processing charges for satellite network filings and administrative procedures*, ITU Res. 88. ITU, *Instruments amending the Constitution and the Convention of the International Telecommunication Union (Geneva, 1992) as amended by the Plenipotentiary Conference (Kyoto, 1994)*, Final Acts of the Plenipotentiary Conference (Minneapolis, 1998), ITU, 1999.

[231] ITU, Press Release,"1999 Session of ITU Council Concludes: New Initiatives Approved for a Broader Approach to Telecommunication Issues in the Global Information Economy and Society (13 July 1999), online: ITU <http://www.itu.int/newsroom/> [hereinafter "1999 Session of ITU Council Concludes"].

practices in bad faith.[232] Indeed, according to this orientation, the ITU must not have more decision mechanisms because this would lead to a politicization of the organization.

On the contrary, other scholars consider that what the ITU needs is more freedom and powers to act. Particularly interesting is the proposition of Prof. Francis Lyall, who reminds us the idea of applying the doctrine of implied powers to the ITU. This public international law theory indicates that an international organization does not only have the functions attributed by its constitutive texts but, under international law, it also has the powers that "it requires in order to fulfil its function."[233]

1. Auctioning With the Spectrum: Why Not?

The recent practices after the Tonga episode have seen the introduction of trade mechanisms, such as auctions, in the regulation of the spectrum. The United States started applying auctions to Personal Communications Services in March 1995, emerging the 60% of the revenues from three companies.[234] Then, Great Britain applied auctions for national and regional services but only in more congested points. Canada followed the U.K. example and also charged the fees according to demand, that is, the more congested or the more used parts recover

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[232] L. Manuta, *supra* note 183. According to this scholar "to ask the ITU to prove that a country is indeed asking for the minimum amount essential to provide services, and then be asked to decide who needs an orbital location more, would turn the ITU into an *unwanted international regulatory agency*" [emphasis added].

[233] F. Lyall, *supra* note 185 at 191-192.

[234] V. Shetty, "What Price Spectrum? Handling of the Communications Spectrum in the UK and Member States of the Commonwealth of Nations; Cover Story" *Communications International* 23:9 (September 1996) 8.

more money than the others do. The used criteria in order to determine the level of consumption were determined by Michael D. Connolly:[235]

> Consumption occurs in the domains of frequency, (i.e., bandwidth used), space (i.e., geographic extent of use), and time (a useful proxy for which might be the degree of exclusivity to frequencies a given usage enjoys).

According to the British Radiocommunications Agency, introducing spectrum pricing has the effect of making users more aware of the scarcity of this resource and also dissuades from the practice of holding frequencies without using them, the case of paper satellites. Putting a price to the spectrum also promotes its equitable access and efficient use. Although a negative aspect is that the spectrum could end on the hands of one only operator.[236] One argument against the introduction of market principles is that the warehousing and leasing of these resources favors the acquisition by the wealthiest countries or the most technologically advanced.[237] However, from an operational point of view one could wonder: what is the problem with that? It is logical that the countries that can operate a system are the ones who acquire the resources.

Another way than avoiding this market treatment should be found in order to guaranteeing access to telecommunication services for less advanced countries. One suggested possibility is vesting the ITU with property rights over the orbital slots and frequencies, giving to the organization the power of the establishment of fees. A mentioned inconvenient to this measure is that giving this power to the organization would derive in a politicization of the process.[238] However, by any means the process of allocating frequencies and slots is already

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[235] *Ibid.* V. Shetty at 11. Michael D. Connolly is the Director of spectrum management operations in Industry Canada's Radiocommunications and Broadcasting Regulatory Branch.

[236] *Ibid.* V. Shetty.

[237] J.C. Thompson, *supra* note 189, at 301.

[238] *Ibid.* at 308-309.

politicized. A major inconvenient is the rejections that this idea would receive from many countries due to the possible violation of the principle of non-appropriation of outer space commented above.

The leasing of orbital positions is more and more common. Many international consortiums have an interest on leasing these resources because they avoid all the complex process of coordination. For developing countries, they can exchange the slots for millions of dollars or for services that they cannot develop.[239] For many of these countries, putting a satellite in orbit is really expensive.

Some author has proposed that the ITU's allotment system should regulate the leasing of orbital positions, and assure that the members that rent their slots use the obtained funds correctly, according to the ITU's purposes, and that money does not stay in particulars' hands, like in the case of Tonga.[240] The question is that auctioning exists. Therefore, the transferring of orbital positions or slots should be regulated from the ITU, if the organization wants to influence in the way this slots' trade affects to developing countries.

2. Application of Other Models

Considering the idea of vesting the ITU with property rights over the debated resources, although it causes problems, presents analogies with another international regime. In this sense, it could be interesting to remember the international regime for the deep seabed resources originally designed under the 1982 United Nations Convention on the Law of the Sea

[239] D. Riddick, *supra* note 204 at 27.

[240] *Ibid.* at 27-28.

[hereinafter, the Montego Bay Convention, its place of signature].[241] This Convention finally entered into force on November 16, 1994. The regime regulating the seabed was modified by the Agreement Relating to the Implementation of Part XI of the Convention on the Law of the Sea [hereinafter, the Agreement], which also entered provisionally into force on November 1994.[242]

The regime of the seabed is based on its consideration by the Convention as "common heritage of mankind."[243] Legally speaking it is not very clear what the particular meaning of this principle is. There are two regions to which this nature has been legally applied: the moon and the deep seabed, with their respective resources.[244] Article 11 of the Moon Agreement establishes an international regime for the exploitation of the moon resources. However, this regime has not been concretized. On the opposite, the deep seabed has a whole regulation on Part XI of the Montego Bay Convention, and it has entered into force, but not applied. Although the outer space, besides the moon and its resources, is not considered "common heritage of mankind," it is still vested with the principles of non-appropriation and freedom of exploration. Therefore, the application of some of these mechanisms could be considered.

It is important to remember here that the application of this "common heritage of mankind" concept to the geostationary orbit was already searched by the developing countries in

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[241] *United Nations Convention on the Law of the Sea*, 10 December 1982, Official Records of the Third United Nations Conference on the Law of the Sea, General Assembly A/CONF.62/122, 7 October 1982; 21 ILM 1261.

[242] *Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982*, 28 July 1994, 33 ILM 1309 (1994); GA Res. 48/263 (1994). This Agreement modifying the regime of the seabed was essential for the ratification of the Convention on the Law of the Sea by industrialized countries.

[243] Art. 136 *Montego Bay Convention*, "The Area and its resources are the common heritage of mankind."

[244] G.M. Danilenko, "The Concept of the 'Common Heritage of Mankind' in International Law" (1988) XIII Ann. Air & Sp. L. 247.

1976.[245] The application of this concept to the whole outer space and its limited resources is too complex due to the opposition of developed countries. This document tries just to briefly illustrate the principles and regime of the international regime established in the Montego Bay Convention, because of its interest as international compromise towards the developing countries.

Part XI of the Montego Bay Convention is referred to "The Area," how is called the deep seabed and its resources, including all mineral resources recovered from this zone.[246] From Article 133 to Article 191 the Convention defines the regime for the exploitation of the Area. This regime is based in the non-appropriation of the resources by any state. All the rights over these resources "are vested in mankind as a whole, on whose behalf the Authority shall act."[247] Therefore, the Convention creates a body to exploit the mineral resources: the Authority. No commercial exploitation shall be undertaken without a production authorization of the Authority. Therefore, the Authority exercises a control over the production in the Area, having also the power to limit the level of production.[248]

The exploitation shall be carried particularly by "the Enterprise," as an organ of the Authority, and the State companies. The Agreement modified the Part XI, introducing market principles on the management of these resources. On the regime established in 1982, these national companies had to transfer their mining technology to the Authority and also to fund the Enterprise's mining activities. These and other provisions gave a privileged position to the Enterprise. The Agreement of 1994 eliminates these provisions. Mainly, there is no more

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[245] Declaration of the First Meeting of Equatorial Countries (Bogota, 3 December 1976), ITU Doc. WARC-BS (17 January 1977). 81-E.

[246] Art. 133 *Montego Bay Convention.*

[247] Art. 137 *Montego Bay Convention.*

[248] Art. 151 *Montego Bay Convention, Production Policies.*

obligation of transferring technology and the companies will have recognized their mine sites on the Area based on their exploration.[249]

Finally, regarding dispute settlement mechanisms, the Montego Bay Convention is quite advanced. The Convention provides for the establishment of a special Seabed Disputes Chamber in the International Tribunal for the Law of the Sea, when there are disputes involving Part XI of the Convention, and the application of binding commercial arbitration in other cases.[250]

The revision in 1994 of the original regime in order to introduce market principles show the orientation that developed countries are imposing in international economic relations. Indeed, the model established in the Montego Bay Convention, through an Authority which deals with the management of the resources, is very interesting. The goal of the presentation of this model is to inspire a possible orientation that the ITU could approach towards the vesting of more management powers with slots and frequencies. The ITU could as well participate more in the increasing commercialization of space activities, organizing the activities of the companies.

As a measure, the membership of international and regional organizations could introduce the management mechanisms of the real actors. The participation of these organizations can provide the technical and market satellite knowledge that does not exist in state representations, which were the traditional participants in the ITU.[251]

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[249] W.S. Scholz, "Observations on the Draft Agreement Reforming the Deep Seabed Mining Provisions of the Law of the Sea Convention" in M.H. Nordquist & J.N. Moore, eds., *1994 Rhodes Papers: Entry into Force of the Law of the Sea Convention* (U.S.A.: Martinus Nijhoff Publishers, 1995) 69 at 70ff. The new regime after the 1994 Agreement will serve industrialized countries' economic interests. This Agreement establishes a market oriented approach, facilitating the signature by the United States and other countries.

[250] Art. 188 *Montego Bay Convention.*

[251] H. Wong, Supra note 210 at 875ff.

Chapter Four - New Waves in the Role of ITU and WTO: Privatization and Trade

During these last years, ITU and WTO have regulated the field of international telecommunications with different objectives and instruments. The main force that at the moment influences the functioning of both organizations is the liberalization of trade in telecommunications together with the privatization of operators and the consequent proliferation of private actors participating in these organizations. This chapter will explore the content of these organizations' regulations. The final aim is to show how the moment has arrived where a cooperation between both of them is essential in order to introduce some rationalization in this framework and in the resolution of potential satellite disputes. First, the chapter analyzes the implications of the WTO complex negotiations and the resulting provisions. Next, this chapter evaluates the trends that the ITU is sustaining.

A. Trade of telecommunications: WTO

As established in Chapter Two, the context where this analysis must be located, within the WTO framework, is the liberalization affecting telecommunications services caused by the last agreement enacted by the WTO in 1997.

1. "Fourth Protocol to the General Agreement on Trade in Services"

As commented above, the *Negotiating Group on Basic Telecommunications* [hereinafter the NGBT] worked since December 1993 in a text for the liberalization of basic telecommunications. The issues to be considered were competitive safeguards, use of

frequencies, the accounting rate system, the schedules for the liberalization, and the introduction of an independent regulator.[252]

The *Fourth Protocol to the General Agreement on Trade in Services* [hereinafter the Basic Telecom Agreement] entered into force on February 5, 1998, with the commitments of sixty-nine WTO members to open their markets on basic telecommunications.

a. Scope of the Agreement

Considering the number of adoptions, the Basic Telecom Agreement can be characterized as quite successful. The agreement was adopted by a total of sixty-nine countries, representing these countries over the 90% of the world's telecommunications market.[253]

Summarizing the impact of this agreement, in words of Ms. Laura B. Sherman,[254]

> Sixty-nine countries made commitments to open their markets for some or all basic telecommunications services to foreign competition. Fifty-two countries guaranteed access to their markets for international services and facilities, with five more countries open for selected international services. In almost all of those countries, international services have been provided by a monopoly that will face competition for the first time. Fifty-six countries agreed to open markets for all or selected services provided by satellites.
>
> Not only have monopolies ended for the first time in many countries, but the competitors providing basic telecom services can be 100 percent owned by foreigners in forty-four countries. Another twelve countries agreed to allow foreign ownership or control of certain basic telecom services, while thirteen countries guaranteed to allow some degree of foreign ownership in their basic telecom services markets.[255]

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[252] L.B. Sherman, "'Wildly Enthusiastic' About the First Multilateral Agreement on Trade in Telecommunications Services" (1998) 51 Federal Communications L.J. 61 at 67 [hereinafter L.B. Sherman, "Wildly Enthusiastic"].

[253] L.B. Sherman, "Introductory Note," *supra* note 133 at 354.

[254] Ms. Laura B. Sherman was the chief lawyer of the United States delegation at the WTO basic telecommunications negotiations.

[255] L.B. Sherman, "Wildly Enthusiastic," *supra* note 252 at 63.

The compromises apply to both resale (using leased private lines) and facilities-based services. They affect also fixed and mobile satellite systems, cellular telephony, and personal communications services. Regarding "value added services" (e.g., e-mail, voice mail, or electronic data interchange), it is important to remember that these services were already liberalized after the Uruguay Round in 1994.

A constant dialogue between the U.S. and the European Union marked the negotiations. The approach of the two blocks to the negotiations completely differed. The main concern of the U.S. was the invasion of its liberalized market by foreign companies. The U.S. had prior liberalized its long-distance telephony market and therefore, the country did not want to open this market without obtaining similar advantages in other countries' markets.[256] This is the reason why the process of negotiations was marked by the U.S. pressure on other countries in order to obtain their compromises towards the liberalization of their markets.

The E.U. approach to the negotiations was completely different, due to its internal process towards the liberalization, much slower than the U.S. process. The European Union was first focused in getting the internal liberalization before January 1, 1998. In this sense, the European Union received the pressure from the United States for the improvement of their lists.

(i) U.S. Final Compromises

Afterwards, the U.S. realized a progressive improvement of its original offer in 1995.[257] While in its initial offer the U.S. avoided the inclusion of intra-state or local services, after the enactment of the Telecommunications Act of 1996, the United Sates included unlimited access to its local market. Its final submission came in November, 1996. At the end, the United States

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[256] P. Malanczuk & H. de Vlaam, *supra* note 53 at 275.

[257] See generally, L.B. Sherman, "Introductory Note," *supra* note 133 at 358ff.

offered unlimited market access to all basic telecommunications services, including local, long-distance and international services. However, the U.S. offer keeps direct ownership restrictions in common carriers radio licenses (wireless services) by a foreign person or government up to the 20%. Moreover, the U.S. retains the rights of COMSAT as the sole entity with access to INTELSAT and INMARSAT. Finally, the U.S. introduced two exemptions to the MFN clause, namely, for one-way satellite transmissions of direct-to-home and direct broadcast and digital audio services.

(ii) Other Commitments

The European Union compromised to full liberalize all basic telecommunications services (local, long-distance and international segments), with restrictions to foreign capital participation in the case of France and Portugal. The E.U. also exempts broadcasting services.

Regarding Canada's compromises, this country offered full market access and national treatment for all services (with a limit of 46,7% foreign ownership) for October 1, 1998, with the exception of fixed satellite services, international services, and submarine cables. The country also compromised market access and national treatment for fixed satellite services for the year 2000, with 100% foreign ownership. However, Canada established some routing restrictions in favor of Canadian infrastructures, ending all restrictions on satellites on March 1, 2000.[258]

All the mentioned countries adopted the Reference Paper that will be discussed below.

Regarding developing countries, their reticence to opening their markets on January 1, 1998 was relevant, due to their fear of the U.S. invasion. That is why their schedules incorporate later dates for the liberalization, usually after year 2000.

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[258] L.B. Sherman, "Wildly Enthusiastic," *supra* note 252 at 102.

b. Reference Paper

At the same time, negotiations were developed in order to enact a set of rules against anticompetitive practices. At the end of the negotiations, fifty-five countries adopted the Reference Paper. The purpose of the document is to prevent former telecommunications monopolies from taking advantage of their dominant position.[259] This document, annexed to the Basic Telecom Agreement, was not included as a text with binding obligations for States. Moreover, this text focuses in results, in principles to be followed, but not in the means to get those results. The negotiators estimated that this set of principles had to be very flexible in order to accommodate different regulatory systems.[260] Therefore, this document has the significance of important regulatory guidelines to conduct the countries which follow them in their liberalization process. [261]

The Reference Paper's first section refers to *Definitions*. The most important provision here is the definition of a "major supplier:"

> A major supplier is a supplier which has the ability to materially affect the terms of participation (having regard to price and supply) in the relevant market for basic telecommunications services as a result of:
> (a) control over essential facilities; or
> (b) use of its position in the market.[262]

This is the type of telecommunications supplier which, according to the text, could act anticompetitively and, therefore, should be subject to the competitive safeguards and

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[259] *Ibid.* at 71.

[260] *Ibid.* at 73.

[261] J.J. Alissi, "Comment: Revolutionizing the Telephone Industry: the World Trade Organization Agreement on Basic Telecommunications and the Federal Communications Commission Order" (1999) 13 Conn. J. of Int'l L. 485 at 493ff.

[262] Reference Paper, Fourth Protocol to the General Agreement on Trade in Services, (1997) 36 I.L.M. 354 at 367 [hereinafter Reference Paper].

interconnection obligations that are defined next in the Reference Paper:[263] the carrier that first controls essential facilities, which are defined in the Reference Paper as facilities [infrastructures] provided by only one or a limited number of suppliers, or facilities that cannot be easily substituted, or second, has a significant market share, considering the relevant market.

Afterwards, the Reference Paper defines a set of "competitive safeguards" to be observed by States:

- *Prevention of anti-competitive practices in telecommunications*: this provision requires States to have "appropriate measures" in order to prevent suppliers from acting anticompetitively. The anti-competitive practices that the text tries to avoid are defined as anti-competitive subsidization, misuse of information by the carrier, and the non-disclosure of essential technical or commercial information to other providers.

However, this provision only requires that the country contemplate these measures in its legislation, but the country does not have to pursue and eradicate any anti-competitive act. Therefore, the provision does not require a result.[264]

- *Interconnection* provisions: Afterwards, there is a set of rules related to 'interconnection,' namely the

> linking with suppliers providing public telecommunications transport networks or services in order to allow the users of one supplier to communicate with users of another supplier and to access services provided by another supplier, where specific commitments are undertaken.[265]

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[263] There was some discussion on the terms of definition of a "major supplier." For the European Union, the inclusion of a reference to the supplier's market power was essential. The concept of significant market power is a term of art in EU legislation and defines carriers with more than 25% market share. Finally, there was conformity that some suppliers could not have control over essential facilities (first part of the definition) but could still control the entrance of new suppliers. Therefore, that reference to the "position in the market" of the carrier was included. L. B. Sherman, "Wildly Enthusiastic," *supra* note 252 at 75.

[264] *Ibid.* at 77.

[265] Reference Paper, *supra* note 262.

This definition is broad enough to cover all types of services, but particular reference is made to 'where specific commitments are undertaken.' Subsequently, interconnection obligations are limited to those services for which WTO Members have scheduled commitments.[266] Then, the provision specifies the standards of interconnection that every country must ensure. In this case, the interconnection obligations seem to be more binding for States due to the formula employed, "interconnection ... will be ensured."

The cited obligations include, among others: first, the application of the national treatment and MFN clause to interconnection, namely the offering of interconnection "under non-discriminatory terms;"[267] second, the provision of interconnection on time, with cost-oriented rates, and the transparency of conditions and terms of the interconnection;[268] third, the procedures for getting interconnection have to be publicly available as well as the interconnection agreement that the major supplier concludes with any carrier;[269] finally, any service supplier must have access to an "independent domestic body" to discuss "disputes regarding appropriate terms, conditions and rates for interconnection."[270]

This dispute settlement function can be performed by a regulatory body, but it is not essential, which takes into account the situation of countries that do not have an independent telecommunications regulator. On the other hand, the provision does not establish any time limit

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[266] L.B. Sherman, "Wildly Enthusiastic," *supra* note 252 at 78.

[267] Reference Paper, *supra* note 262 at para. 2.2 (a).

[268] Reference Paper, *supra* note 262 at 368, para. 2.2 (b); and L.B. Sherman, "Wildly Enthusiastic," *supra* note 252 at 80. Many of the interconnection obligations of the Reference Paper derive from the U.S. Telecommunications Act of 1996 or from the European Union Interconnection Directive.

[269] Reference Paper, *supra* note 262, para. 2.3 and 2.4.

[270] *Ibid.* para. 2.5; and L.B. Sherman, "Wildly Enthusiastic," *supra* note 252 at 83; Art. VI GATS requires all State Members to offer suppliers of services an avenue for remedy of administrative decisions, separate from the WTO dispute resolution system. This is the meaning of this provision.

for the decision of the disputes. At this respect, the only expression is that the claim can be presented "after a reasonable period of time."[271]

- *Universal Service*: the Reference Paper includes a provision regarding universal service.[272] The most important aspect is that the text gives complete freedom to States to define with kind of universal service they want to maintain, and the obligations that the State establishes for carriers regarding universal service will not be considered as anti-competitive actions.[273]

- *Public availability of licensing criteria*: in cases where a license is required, the State will make publicly available all information regarding the licensing criteria, the period of time usually required to issue a license, and the terms and conditions for individual licenses.[274] This provision was controversial during the negotiations, due to the consequences that the licensing regulation can have for carriers. European and Japanese negotiators specifically required the establishment of a standard licensing period, and the reason was the tendency of the U.S. Federal Communications Commission [hereinafter the FCC] to hold license applications for a long time without any action or explanation to the applicant.[275]

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[271] *Ibid.* Reference Paper, para. 2.5 (b).

[272] The concept of universal service has changed through the years. When this concept surged at the beginning of the 1900s, universal service was associated with a technical compatibility goal, in the idea that the adoption of a single technical standard was necessary so all the telephone systems could connect with each other. In the 1970s, universal service adopted another meaning. It now referred to the 100% household penetration. Telephone service was now seen as a public service and universal service implied the right of every citizen to be telephonically connected. This idea of telecommunications as a public service to be offered to everybody lets governments to fix conditions and rules for new providers in order to guaranty universal service. See e.g K. Harvey, "Universal Service and Effective Self-Government: Interoperability Strategies for Global Partneships" (1998) 5 Telecom. & Sp. L. J. 177 at 185ff.

[273] Reference Paper, *supra* note 262 para. 3.

[274] *Ibid.* para. 4.

[275] L.B. Sherman, "Wildly Enthusiastic," *supra* note 252 at 85.

Of particular relevance, some delegations suggested the introduction of a clause impeding the U.S. from using public interest objectives when licensing. The European Union indicated that these public interest criteria should not be used as a motive to refuse licenses.[276] Finally, however, that provision was not included because negotiators thought it was unnecessary since Article VI of the GATS already covered licensing conditions. Although Article VI of the GATS does not make any reference to the particular criteria that a Member can use in their internal regulation, neither it establishes exceptions for the country not to issue a license.[277]

- *Independent Regulators*:

> The regulatory body is separate from, and not accountable to, any supplier of basic telecommunications services. The decisions of and the procedures used by regulators shall be impartial with respect to all market participants.[278]

This provision obeys the traditional situation where the regulatory body fixing conditions to act in the market and the main, and usually monopolistic, operator are the same organization.

- *Allocation and use of scarce resources*: the last provision of the Reference Paper implies a reiteration of some general obligations already imposed by the GATS Agreement.

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[276] *Ibid.* at 86.

[277] GATS Agreement, *supra* note 112 at 52-53. Art. VI of the GATS regards the 'Domestic Regulation' of the trade in services. Regarding this particular subject, paragraphs 4 and 5 of the Article are relevant:

> 4. With a view to ensuring that measures relating to qualification requirements and procedures, technical standards and licensing requirements do not constitute unnecessary barriers to trade in services, the Council for Trade in Services shall, ... develop any necessary disciplines. Such disciplines shall aim to ensure that such requirements are, inter alia:
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> (a) based on objective and transparent criteria, such as competence and the ability to supply the service;
>
> (b) not more burdensome than necessary to ensure the quality of the service;
>
> (c) in the case of licensing procedures, not in themselves a restriction on the supply of the service.
>
> 5. (a) In sectors in which a Member has undertaken specific commitments, ... the Member shall not apply licensing and qualification requirements and technical standards that nullify or impair such specific commitments in a manner which:
>
> (i) does not comply with the criteria outlined in sub-paragraphs 4 (a), (b) or (c); and
>
> (ii) could not reasonably have been expected of that Member at the time the specific commitments in those sectors were made.

Any procedures for the allocation and use of scarce resources, including frequencies, numbers and rights of way, will be carried out in an objective, timely, transparent and non-discriminatory manner. The current state of allocated frequency bands will be made publicly available, but detailed identification of frequencies allocated for specific government uses is not required.[279]

This provision is a reminder of some obligations due to the importance that access to these scarce resources has. The allusion to transparency and non-discrimination is a reiteration of MFN and national treatment general GATS obligations. However, the obligation to act in an "objective and timely ... manner" is new.[280] In this respect, the reference to the time requirement is interesting, due to the problem already mentioned in this document about delays in the use of the allocated frequencies with the ITU. Although the Reference Paper does not establish a more specific obligation, an excessive time delay in the allocation or use of frequencies and orbital positions could be taken to the dispute resolution system.

2. Special provisions regarding certain services

On April 30, 1996, the NGBT presented its final report to the Council on Trade in Services. However, there were yet not enough Schedules of Commitments and problems existed regarding two sectors: satellite services and international services. Therefore, a Group on Basic Telecommunications [hereinafter the GBT] was established in order to continue with the negotiations. The purpose of this section is to analyze several specific sectors which are more controversial.

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[278] Reference Paper, *supra* note 262 at 369, para. 5.

[279] *Ibid.* at para. 6.

[280] L.B. Sherman, "Wildly Enthusiast," *supra* note 252 at 87.

a. Satellite Services

With respect to satellite services, the problem concerned the different national approaches in the proposed Schedules. Some States included a reference to satellite services, while others excluded completely the application of their commitments to satellites. Finally, the GBT enacted *Notes for Scheduling Basic Telecom Services Commitments* on January 16, 1997, in order to clarify that unless the Member Schedule establishes something different, the listed telecom services include local, long distance and international services, for public and non-public use, provided by any means of technology (e.g., cable, wireless, satellites).[281]

b. Particularities of the Radio Spectrum

Since the beginning of the negotiations, a problem existed pertaining to the consideration of the technical limitations to the radio spectrum. This issue came from the awareness of the negotiators that due to the natural limitations of the spectrum, the number of suppliers could be limited. Therefore, the issue concerned how to consider non-discriminatory limitations on the number of suppliers, and whether it was necessary or not to regulate them as market access limitations.[282]

The problem here is that the types of limitations on market access that can be scheduled, defined by Article XVI of the GATS Agreement, are "limitations on the number of service suppliers whether in the form of numerical quotas, monopolies, exclusive service suppliers or the requirements of an economic needs test."[283] This is why some delegations pointed out that Article XVI did not apply to limitations in the spectrum, these limitations were strictly technical.

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[281] WTO, *Notes for Scheduling Basic Telecom Services Commitments*, WTO Doc. S/GBT/W/2/Rev. 1, (1997), 36 I.L.M. 354 (1997) at 371.

[282] L.B. Sherman, "Wildly Enthusiast," *supra* note 252 at 91ff.

[283] GATS Agreement, *supra* note 112, Art. XVI, "Market Access."

Afterwards, due to the confusion on the subject, a number of countries included entries on their market access columns of their schedules denoting that the commitments for radio services were "subject to the availability of spectrum," or similar wording.[284]

Due to the non-clear correspondence between these limitations and the ones in Article XVI of the GATS Agreement, the GBT issued another Note, *Market Access Limitation on Spectrum Availability*, clarifying that spectrum management does not need to be listed under Article XVI. It specifically establishes that this question is subject to Article VI, "Domestic Regulation," of the GATS Agreement, and to other provisions, and that

> countries which have made additional commitments in line with the Reference Paper on regulatory principles are bound by its paragraph 6 [*Allocation and use of scarce resources*].
> Therefore, words such as "subject to availability of spectrum/frequency" are unnecessary and should be deleted from Members' schedules.[285]

Therefore, this note clarifies that in the current situation, with countries that have adopted these declarations in their schedules and countries that did not adopt them, all of them benefit from the same protection derived from Article VI of the GATS Agreement.

c. Implications for the International Satellite Organizations [hereinafter ISOs]

Another issue that negotiators discussed was whether or not the Member commitments were applicable to the ISOs, such as INTELSAT and INMARSAT, and their affiliates, that is, private companies separated from the ISOs. The issue here was to decide if the ISOs are "service suppliers of a WTO member," since the GATS wording binds these bodies. It was agreed that the ISOs cannot be considered service suppliers of another Member, since they are created by a

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[284] L.B. Sherman, "Wildly Enthusiast," *supra* note 252 at 92.

[285] WTO, *Chairman's Note: Market Access Limitations on Spectrum Availability*, WTO Doc. S/GBT/W/3, (3 February 1997), 36 I.L.M. 354 (1997) at 372.

treaty and not under national law.[286] On the contrary, affiliates of these organizations are incorporated under domestic laws and, therefore, derive benefits from WTO commitments. One good example of this situation was INMARSAT and its spin-off company, ICO Global Communications, Inc., incorporated under British law. The situation changed when INMARSAT privatized, as explained in Chapter II.

d. International Services: the Accounting Rate System

It was the United States that presented the obstacles for the inclusion of international services in the market access commitments section due mainly to the accounting rate system. According to the United States, countries that were not adopting full market access commitments under the Basic Telecom Agreement could cause some distortions to the competitive markets.

The problem was that the prices for the same service, that is, the termination of an international call, were, and are, very different. For proponents of including this in GATS, these prices create barriers to fair trade and should be subject to GATS disciplines. An initial draft of the agreement contained a provision indicating that access to public telecommunications infrastructures should be cost-oriented, but the text did not define what was "cost-oriented." That reference to pricing was deleted at the end. Indeed, later during the NGBT negotiations, there was a provision supported by the U.S. in order to require the publication of the accounting rates.[287] Delegations did not find consensus about the treatment of accounting rates by the agreement and, therefore, the subject was not treated and a few countries adopted MFN exemptions. Indeed, negotiators achieved a "gentlemen's agreement" not to apply to the WTO

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[286] L.B. Sherman, "Wildly Enthusiast," *supra* note 252 at 94.

[287] P.A. Stern & T. Kelly, "Liberalization and Reform of International Telecommunication Settlement Arrangements" (Paper presented in the Latin American and Caribbean Telecommunication Finance and Trade Colloquium, Brasilia, 14 - 16 July 1997), online: ITU <http://www.itu.int> at 19-20.

dispute settlement in case of a conflict with discriminatory accounting rates and not to review the subject until the next round of negotiations that start in January 2000.[288]

(i) How Does the Current International Settlement System Traditionally Work?

The bottom line of the problems regarding international services is the deficiencies that the international settlement process is presenting since some years ago. The international settlement process is the system by which international telecommunications providers share revenues and expenses derived from the provision of international telecommunication services among them. The system works through a bilateral agreement between two carriers which sets the conditions for the provision of telecommunications between them. What this agreement sets is an "accounting rate"[289] which is the price each provider is going to pay to the foreign provider for each minute of international calls originated in its territory. The "settlement rate" is the portion each carrier is going to pay to the other carrier.

Subsequently, the telephone carrier of each country calculates the calls that it has originated and pays a sum to the telephone company of the country where the calls were completed. Therefore, the country which originated more international calls pays to the other country a 'net settlement payment,' in order to adjust the imbalance between the two of them. If

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[288] See *ibid.* at 70-71. This achievement is in WTO, *Report of the Group on Basic Telecommunications*, WTO doc. S/GBT/4 (1997), 36 I.L.M. 354 at 369, para. 7, "in order to avoid the submission of further such [MFN] exemptions, it is the understanding of the Group that the application of such accounting rates would not give rise to action by Members under dispute settlement under the WTO; and that this understanding will be reviewed not later than the commencement of the further Round of negotiations on Services Commitments due to begin not later than 1 January 2000."

both countries have completed the same minutes in international calls, there will be a compensation at settlement and no exchange of money.[290]

The current accounting rate system was developed in a moment where monopolies were in charge of national telecommunications. At the same time, monopolies were responsible for dealing with international telecommunications and companies had to use the systems established by the monopolistic carrier in order to interconnect with the end user in a foreign country. As a scholar says,

> Regulatory structures excluded companies from carrying traffic directly to end users, and carriers of international traffic were forced into accepting these artificially inflated international settlement rates. These settlement rates represented a form of tariffication.[291]

This existing framework caused much higher settlement rates than the actual costs of terminating the international call.

(ii) Avoiding the System: Having a Liberalized Market Is Not Always an Advantage

As commented above, the United States introduced many problems in the negotiations of the Basic Telecom Agreement with respect to international services. The U.S. was specifically talking about what is referred to as "one-way bypass" of the accounting rate system. This is the case of foreign carriers from non-competitive markets, which would increase the volume of international call traffic with the U.S., but doing this through private lines, which is possible

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[289] The ITR define "accounting rate" as "the rate agreed between administrations' in a given relation that is used for the establishment of international accounts." This is applicable to private operating agencies. See ITR, supra note 158 at Art. 2.8.

[290] J.J. Alissi, *supra* note 261 at 495-496.

[291] *Ibid.* at 498.

because the U.S. market is liberalized. The key point in this situation is that the traffic carried through re-sold private lines is out of the accounting rate system.[292] On the other hand, carriers from the U.S. or other competitive markets could not use the same routing method in the opposite direction because the only way of entering into those non-competitive markets is through one monopolistic operator. Therefore, the consequence is that many more calls appear as originating in the U.S. which means that the U.S. has to pay much more under the current accounting rate system.[293]

Another technological phenomenon which causes the same result is the "call-back" service. This service allows customers to change the place of origin of an international call. For instance, taking the United States as an example, a user from another country is able to call from its territory to the United States' reseller, who switches the call, and makes it appear like an outbound call from within the United States.

Indeed, according to the FCC, there is an unfair situation derived from the exorbitant settlement rates that the foreign monopoly is able to charge to U.S. carriers when they try to enter into the foreign market competing among them. This practice is known as "whipsawing" and it refers to the increase of settlement rates beyond their actual costs, knowing that the U.S.

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[292] Accounting rates are negotiated between the operators as defined by the International Telecommunication Regulations as "administrations or recognized private operating agencies (RPOAs)." Then, the ITU Constitution defines administrations and RPOAs as a governmental department and an entity designated by a governmental department, respectively. Therefore, only the designated operators run the accounting rate system. See L.B. Sherman, "Wildly Enthusiastic," *supra* note 252 at 70.

[293] *Supra* note 252 at 95. According to the FCC, "in 1996, the U.S. settlement deficit totaled $ 5.4 billion, double what it was in 1990."

companies will pay. Through this way, U.S. companies subsidize monopolistic telephone services in other countries.[294]

There is another distortive element mentioned from the United States point of view. This is the particular advantage that the previous settlement rates status gives to the U.S. affiliates of these foreign carriers when they operate international services. While U.S. companies have to pay these high rates, the U.S. affiliates make an internal transference to its company. Subsequently, this derives in a preferential situation of the U.S. affiliate over its competitors in the U.S. market.[295]

B. ITU Highlights

The ITU's functioning as an organization is marked by the efforts that it has made in order to participate in the liberalization of telecommunications and to not lose its status in the international scenario. One important aspect of these trends is the cooperation between the ITU and the WTO concerning the liberalization of telecommunications.

As explored above, the ITU has undergone reforms since the first steps taken in the 1989 Nice Plenipotentiary Conference. In 1989, the ITU recognized that there was a need to adapt the organization to the technological revolution and the global trend towards the privatization and, by Resolution 55, entitled the HLC to study this subject. Since then, the goals of the organization have changed and broadened considerably. In this sense, the main goal of the Minneapolis Conference in 1998 was the conclusion of this reform process of the ITU.

According to Mr. Donald J. MacLean,

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[294] See *Cable & Wireless P.L.C., petitioner v. Federal Communications Commission and the United States of America, respondents; Sprint Corporation, et al., intervenors*, 166 F.3d 1224 (D.C. Cir. 1999) [hereinafter *Cable & Wireless v. FCC*] at 1227.

[295] *Ibid.*

This reform movement has had three principal objectives:

- ✓ to improve the efficiency and effectiveness of ITU structures, working methods and management practices;
- ✓ to enhance the role of non-governmental entities and organizations in the ITU by increasing their rights and obligations;
- ✓ to establish the ITU as a forum for dealing with matters of telecommunications policy and regulation.[296]

This study has already analyzed the process of reform up to the Minneapolis Conference in 1998 and part of these objectives. Chapter Three specifically examined the frequency management instruments of the ITU and their evolution. Therefore, the remaining issues to analyze here concern the role of private bodies in the ITU and the increasing participation of the ITU in policy and regulation matters.

The Kyoto Conference was essential for this new role of the organization. Two main results come out from this conference: the beginning of the strategic plans of the organization and the creation of a new instrument, the World Telecommunication Policy Forum, in order to discuss global policy issues which affect more than one single country.

1. Strengthening the Role of Non-Governmental Entities and Organizations in the ITU

For the first time, the 1992 Geneva Constitution and Convention provided for increased participation by non-Administration entities and organizations in the activities of ITU's Sectors. The issue of a modification of the membership of the organization appeared in the Conference as a possible result of the change in the telecommunication field. According to the organization, with these new provisions, the ITU should be able to play a stronger role in stimulating cooperation between the increasing number of entities related to telecommunications. There are

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[296] Mr. Donald MacLean is the chief of the ITU Strategic Planning and External Affairs Section, see *supra* note 161 at 152.

currently 188 member States and about 500 nongovernmental members, which in their main part represent manufacturers and operators.[297] Therefore, the treatment of this subject by the ITU is completely justified. In this sense, the main concern of the ITU was not to be pushed aside by this increase of new actors.[298] The public law character of the ITU did not accommodate the interests of private companies and the organization had to adapt in order to include them.

a. From Kyoto to "ITU-2000"

The Kyoto Conference named specifically a number of principles for this participation of private entities and organizations. First, as mentioned above, Kyoto brought the first Strategic Plan with the goals and priorities of the ITU. The organization's strategic orientation changed in this moment. According to the strategic plan, the strategic focus for the next plenipotentiary period had to change now to the activities of the ITU and for that purpose, it had to serve the needs of its membership, both Administrations, and other "members" which participated in the ITU's work.[299] The reason is the change on the membership profile of the organization. While the organization's membership was composed of administrations that were operators at the same time before, now these administrations have become regulators, finished the monopolistic situation, and increased the number of operators in every country. The Strategic Plan supports the need to maintain the inter-governmental nature of the organization, but the same need to include the private sector participation in order to get the ITU's goals. The first recommended measure is

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[297] C. Flissi, "The ITU Moves to Trim Down, Speed Up and Work Closely with Private Sector" *ITU newsletters* (4 May 1998), online: ITU <http://www.itu.int/newsarchive>.

[298] ITU, Newsletter 7/94, "International Telecommunication Union: Perspectives" (1994) at 2, online: ITU <http://www.itu.int/plweb-cgi/fastweb...3A%20the%20Challenges%20of%20Change>.

[299] ITU, *Strategic Plan for the Union, 1995-1999*, Annex to Resolution 1, *Final Acts of the Kyoto Conference*, supra note 151 at 97.

the participation of these non-governmental entities in national delegations and in fora established by Administrations.

There are other results coming from this conference. The clearest innovation in this sense was the adoption of a new provision in the Convention of the ITU granting the possible category of "observer status" to operators, scientific or industrial organizations and organizations of an international character in front of the Plenipotentiary Conference.[300] However, the right to vote will remain a prerogative of Member Administrations. It also enacted Resolution 15 concerning the "Review of the Rights and Obligations of all Members of the Sectors of the Union," which established a Review Committee to implement this resolution.

All these decisions are based on a distinction between the "Members of the Union," which are defined in Article 2 of the Constitution and are only States parties, and the "members of the Sectors," which appear in Article 19 of the Convention ("Participation of Entities and Organizations Other than Administrations in the Union's Activities"). Entities and organizations are referred always as "members" of the Sectors.[301]

The Review Committee concluded its work and presented a Final Report with a series of recommendations to the Council in 1996.[302] After this Report, the ITU Council set up a Working Group called "ITU-2000" in order to prepare amendments to the Constitution and

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[300] Art. 23, *Invitation and Admission to Plenipotentiary Conferences when there is an Inviting Government*, s. 262A and s. 229, ITU Convention as amended by the Kyoto Plenipotentiary Conference, supra note 151.

[301] Review Committee, Resolution 15 (Kyoto, 1994), Document 44-E, 14 May 1996. "In accordance with Article 2 of the Constitution, Members of the ITU are States; however, ITU activities involve:

- The Member, the actual governmental members who are the ITU.
- The members, the players who have identified reasons for joining in the activities of the Sectors of the ITU.
- The staff of the ITU."

[302] ITU, Report of the Review Committee on Resolution 15 (Kyoto, 1994), ITU doc. C96/18.

Convention to, among other things, enhance the rights of non-government actors.[303] The recommendations of this group as presented to the Council are:

- ✓ The group recommends that ITU should remain an intergovernmental organization, but a proper mechanism for a fruitful cooperation between Members States and Sector Members should be establish. It is interesting how the group reiterates that the organization should remain intergovernmental. This declaration shows the influence of the privatization trends also in the ITU.[304]
- ✓ ITU-2000 recommends to give Sector Members the status of Members of the ITU, therefore, to establish only one category of membership distinguishing between "M" Members and "m" members.[305] Indeed, all differences between Sector Members should disappear, leaving to each State the right to designate any of its Sector Members to act on its behalf. In the same sense, all Sector Members would have the same rights and obligations.
- ✓ It is also recommended to obtain a clear statement of the rights and obligations of all Sector Members because many times they do not know them. It should be insured, as well, that the financial contributions of the members are directed to the sectors for which they were made. This last recommendation is justified because the participation of operators and manufacturers is increasing and they want their contributions to be effectively used.

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[303] ITU-2000, Draft Report to the Council on Resolutions 15 and 39 (Kyoto, 1994), ITU doc. 60-E, 17 April 1997.

[304] Even Mr. Pekka Tarjanne, Secretary-General of the ITU at that moment, started a speech in the International Institute for Communications meeting in Montreal with the question "Shall we privatize ITU?" recognizing the need to adapt the organization to the dynamism of the private sector. See *ibid.* at 2.

[305] See *ibid.* at 3, Rec. 3.

- ✓ In order to simplify the procedures of application as Sector Member and to facilitate the participation of potential members, the Committee recommends the adoption of an additional procedure to become a Sector Member. The entity would apply directly to the Secretary General who will inform the applicant's Member State. The Treaty Member can give approval of this application or, if it does not answer, the application will be approved. This would give more initiative to private entities.
- ✓ In order to encourage the participation of small entities it is recommended that lower levels of contribution to the organization, according to a set of criteria, such as the size of the company, should be established.

b. Minneapolis

These recommendations became tangible at the Minneapolis Plenipotentiary Conference in 1998. The most important adoptions of this conference on this particular subject are:

(i) the delegation of certain powers to the Development and Standardization Sectors' Advisory Groups, where Member States and Sector Members will participate on an equal footing, and the transfer of authority to study groups to adopt standards directly, when they do not have regulatory implications;

(ii) the adoption of a 'Bill of Rights' for the Sector Members, eliminating privileges that main operators had before;

(iii) the addition of the recommended procedure that allows non government agencies and organizations to directly apply for ITU's Membership to the Secretary General; and

(iv) the introduction of a new member category of "Associate" for small entities and organizations that are only interested in some subject and will pay a reduced fee.[306]

The Conference also recognizes that the increase of rights of private entities implies a reconsideration of obligations in order to get a fair balance. Therefore, the current ratio of contributions between States and private members will be studied for the next Plenipotentiary Conference.

Therefore, introducing some conclusions, the participation of private entities in the ITU is increasing even if this tendency is starting through recommendations and decision of no regulatory implications. Moreover, the ITU is starting to reconsider their financial contributions. If their contribution is increased, the consequence will be the adoption of more prerogatives. The tendency for the future appears to be the progressive privatization of the ITU.

2. Surpassing Its Technical Role: ITU and Trade

As in the previous case, Kyoto represents an important conference for this subject. This conference leads a strategic shift from ITU's traditional technical role to a policy-oriented approach in order to make the ITU play a leading role in the new era of the global information economy and society. In this sense, the first Strategic Plan for 1995-1999 already pointed out the globalization of the economic activity and the importance of telecommunications as the key to expanding trade in services.[307] The ITU recognizes that, as a result of the changes that have occurred in the telecommunications field, public policies, legislative frameworks and regulatory institutions now play a very important role and that other institutions, such as the WTO, regulate

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[306] ITU, *Press Report on the Minneapolis Plenipotentiary Conference*, *supra* note 162 at 2. See also D. J. MacLean, *supra* note 161 at 154.

[307] See ITU, *Strategic Plan 1995-1999*, *supra* note 299, s. B. 11, *Changing Telecommunication Environment, Global information economy and society.*

trade in telecommunications goods and services. Therefore, "reviewing and updating the ITU's role in the regulation of telecommunications should be a strategic priority for the period 1995-1999."[308]

The Strategic Plan establishes other priorities of the ITU for the period 1995-1999. First, there is a need to broaden the scope of the organization's activities. For this purpose, the ITU creates a new forum, the World Telecommunication Policy Forum [hereinafter WTPF] in Resolution 2, in order to provide with a framework for discussion of telecommunication policy issues.[309] The text even points out potential issues to be studied by this forum, e.g. "the implications of the Marrakech Agreement, including the General Agreement on Trade in Services (GATS)."[310] Another priority concerns the development of strategic alliances with international organizations which participate on the development of telecommunications, such as the new WTO.[311]

a. ITU and Trade: Second ITU World Telecommunication Policy Forum

Trade in telecommunications has been the favorite subject in many initiatives of the ITU undertaken during these last years. For instance, the World Telecommunication Development Report of 1996/97 had for its theme, "Trade in Telecommunications" and was published to coincide with the WTO Agreement on Basic Telecommunications.[312] In the same sense, "Trade

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[308] *Ibid.* s. C. 16. *A General Strategic Approach.*

[309] Resolution 2 Kyoto Conference, supra note 151.

[310] "Strategic Plan," *supra* note 299, s. D. 2, *General policy and programme activities, Broadening the scope of Union activities.*

[311] *Ibid.* s. D. 3, *Increasing the Union's leverage.*

[312] ITU, Press Release, "ITU to Release Report on Trade in Telecommunications" (14 February 1997), online: ITU <http://www.itu.int/newsroom/>. The report provides extensive information about market trends and the state of the different market segments. It also analyzes the impact of the WTO agreement and the risks of losing investments for countries which have not made commitments to liberalize their markets.

in Telecommunications" was the subject chosen for the World Telecommunication Day in 1998.[313]

However, the most important event regarding this subject was the Second WTPF which discussed "Trade in Telecommunications Services" and was held in Geneva during March 16-17, 1998. These forums were created in 1994 by the Kyoto Conference, as mentioned above, and they act through reports and opinions for consideration by Members and relevant meetings, but do not produce binding resolutions.

The agenda of this meeting included the study of the implications of the WTO Basic Telecom Agreement with respect to telecommunications policies and regulations of ITU member States as well as the implications for developing countries. It also purported to assist countries in adapting to the new situation. Perhaps the most interesting is the invitation that the Policy Forum makes to the ITU Secretary-General:

> - to accelerate action required by Kyoto Resolution 1 [Strategic Plan] and ... to cooperate with the WTO secretariat in identifying areas of common interest ...
> - to prepare, in cooperation with the WTO secretariat, a draft cooperation agreement for consideration by the Council and the 1998 Plenipotentiary Conference;[314]
>
> The forum also invites the ITU Council
>
> to invite WTO to take account of the urgency attached to the conclusion of a cooperation agreement between WTO and ITU on areas of common interest.[315]

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[313] See ITU, "World Telecommunication Day 1998: Message by the ITU Secretary-General" (1998) ITU newsroom, online: ITU <http://www.itu.int/newsarchive/>.

[314] ITU, World Telecommunication Policy Forum, *Report by the Chairman: Trade in Telecommunication Services 1998* (held on Geneva on 16-18 1998), Part II at 5, online: ITU <http://www.itu.int/itudoc/osg/spu/fora/45501_ww7.doc>.

[315] *Ibid.*

b. Cooperation between ITU and WTO

Taking into account the recommendations presented in the previous section, it is almost mandatory to see whether, through the shift in the role of the ITU and the increasing participation of the private sector, a political cooperation between these two organizations that are influencing international telecommunications is possible and how both can interact.

(i) ITU Fifth Regulatory Colloquium at 1995

Prior to the Second WTPF, the issue of cooperation between ITU and WTO was considered. In 1995, an ITU regulatory colloquium was held in Geneva with the goal of analyzing the impact that the free trade regime of the WTO would have on national telecommunication regulations.[316] The ITU Colloquium took the innovative step of inviting as participants officials and policy makers involved in the on-going WTO negotiations. This represented, therefore, an example of informal cooperative meeting between officials of both organizations. However, the colloquium's purpose was "educational and analytic: to explain to the telecom community how their activities will be affected by the new WTO regime."[317] The report justifies this colloquium in the growing convergence of the ITU and WTO's goals which is to increase the value and utility of telecommunications as a whole and to encourage telecommunications regulatory reform.[318]

The report analyzes the WTO regime and its implications for national telecommunications regulations and operators. While this subject will be studied below, the most

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[316] ITU. *The Changing Role of Government in an Area of Telecom Deregulations. Trade Agreements on Telecommunications: Regulatory Implications* (1995) Report of the Fifth Regulatory Colloquium, Geneva, 6-8 December 1995. Online: ITU <http://www.itu.int/itudoc/osg/colloq/chai_rep/fifthcol/fifth.pdf>.

[317] *Ibid.* at 5ff.

[318] *Ibid.*, Chairman's Report, *Introduction and Summary* at 11ff.

interesting part of the report is the section dedicated to the relationship between the ITU and the WTO. In this respect, the report starts recognizing the complementary roles of these two organizations regarding trade agreements on telecommunications. Then, the report makes a series of recommendations divided into two issues:

- Basic Issues. The WTO system will have an important impact, not only on national regulations, but also on ITU activities "with regard to such matters as accounting rates and the trade related aspects of frequency spectrum policy."[319] In this respect, the colloquium confirmed in the meetings that the questions that were studied by the WTO negotiations were inseparable from many of the issues traditionally covered by the ITU.

With the recognition of the ITU's treaties and practices, it will make sense for the WTO "to make extensive use of the deep expertise on those and other relevant matters that exist within the ITU."[320]

- Operational Issues. Next, the report suggested several cooperative approaches between the two organizations. One of them is the exchange of information between them in order to assist better their responsibilities. For instance, the ITU could provide information about spectrum management policies or accounting rates, and could supply expert advice to WTO panels in case of dispute settlement proceedings. Another interesting idea is the extension of the ITU's practice on private sector participation to selected joint WTO/ITU activities. Finally, it is recommended to establish of a high level informal working committee to study these issues.[321]

Finally, it is interesting to reproduce here the questions that arose in the discussions of the colloquium as reproduced in the report:

> - To what extent will tariff issues currently considered by the ITU's study groups become trade issues subject to WTO?

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[319] *Ibid.* at 45.

[320] *Ibid.*

[321] *Ibid.* at 46.

· Are spectrum allocation processes at the supra-national level also likely to become trade access issues?
· Similarly, as standards-setting can be used to develop or perpetuate trading blocs, will the ITU need to alter its standardization procedures? If so, in what way?
· A modern key feature of the ITU is the extensive participation of the private sector; would such type of participation be of value to the WTO in its work on trade/telecom matters?[322]

(ii) Current State of the Question

What has happened with these suggestions regarding a cooperation agreement with the WTO? The 1998 Minneapolis Conference developed the Strategic Plan for 1999-2003.[323] Like the previous plan for 1995-1999, this document presents the main policy achievements of the Minneapolis Conference and provides a framework with the goals of the ITU for the next four years. There are several important goals in this framework, such as the revision of the International Telecommunication Regulations in order to adapt them to the new international scenario created by the WTO Agreement. Other aims are the improvement of the structure and efficiency of the sectors, in particular the Radiocommunication Sector, which is working under a heavy regulatory burden, and the assistance to developing countries in adapting to the changes in the telecommunications environment.[324] However, nothing is mentioned about the possible cooperation of the two organizations in question.

Finally, the ITU Council met in July 1999 with a new ITU Secretary-General, Mr. Yoshio Utsumi. This Council adopted a number of initiatives but, concerning this subject, the Council resolved that further negotiations on the agreement with the WTO are requested.[325]

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[322] *Ibid.*, Attachment 3- Suggested Discussion Outline, at 67ff.

[323] ITU, *Strategic Plan for the Union, 1999-2003*, ITU Res. COM5/8 (1998).

[324] See also D.J. MacLean, *supra* note 161 at 154-155.

[325] ITU, "1999 Session of ITU Council Concludes," *supra* note 231.

C. *Who Is Encouraging the Liberalization? United States Dynamism*

This section analyzes some of the most important actions taken by the United States in the field of telecommunications, some of them related to the above commented problem of the accounting rates. The goal is to demonstrate the importance of this country's participation and how the United States encourages the liberalization of telecommunications in other countries. However, it is not the goal of this section, neither of the rest of this study, to analyze in deep the regulatory framework of the United States.

It is interesting to first illustrate the most important trends in the U.S. current regulations. The evolvement of U.S. law is characterized by a transition from public-interest-based regulations to the introduction of a more market-oriented system. In this context, the Telecommunications Act of 1996 put some constrains in the traditional FCC's powers emanating from public interest principles. This act is clearly orientated towards the promotion of market principles. However, clauses still remains which authorize the FCC to enact "public-interest" based regulations.[326]

1. Unilateral Treatment of an International Conflict: Trying to Solve the Accounting Rate Problem. *International Settlement Rates Order*

In order to solve the previously mentioned problem of high settlement rates, considering that the Basic Telecom Agreement did not include them, and to prepare the U.S. market before this agreement entered into force, the FCC enacted a Report and Order in August 7, 1997[327] in order to establish lower standards on international settlement rates, which would reduce U.S.

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[326] T. Takigawa, "The Impact of the WTO Telecommunications Agreement on US and Japanese Telecommunications Regulations" (1998) 32 (6) J. World T. 33 at 34.

[327] International Settlement Rates, 12 F.C.C.R. 19,806 (1997) (report & order), 9 Comm. Reg. (P&F) 1.

payments to foreign operators. The purpose of the FCC was to lower the settlement rates to a cost basis imposing U.S. companies the agreement with foreign carriers about the maximum rates to pay.[328]

For some time, the FCC discussed the problem of the accounting rate system but internal doubts about whether or not the FCC should assume a policy regarding this subject and concerns that FCC could violate national treatment obligations when imposing special conditions on foreign-affiliated companies in the U.S. prevented it from adopting any measure.[329]

The order gives the U.S. carriers a period varying from one to five years to implement these benchmarks, depending on the economic development of the foreign carrier's country.[330] Nevertheless, for foreign-affiliate U.S. carriers, the order requires them to immediately apply immediately these benchmarks as a condition of offering international services to the affiliated country.[331]

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[328] J.J. Alissi, *supra* note 261 at 500ff. The order imposes a system of maximum rates according to the carrier's country. Specifically, settlement rates paid by U.S. carriers may not exceed 0.15% per minute for foreign carriers from upper income nations, 0.19% per minute for carriers from medium income nations, and 0.23% per minute for carriers from lower income countries, see International Settlement Rates, *ibid.* at 19,850, 19,860-61. In order to apply this rule, the order categorizes countries by level of economic development, using as reference the World Bank and ITU's classification based on level of gross national product (GNP) per capita. The established classification differentiates between: per capita GNP of $ 8,956 or more for upper income nations; per capita GNP between $ 726 and $ 8,955 for middle income nations; and per capita GNP of less than $ 726 for lower income nations. It is interesting how the FCC calculated the previous benchmarks. It used a "tariffed components price" [hereinafter TCP] system, adding estimated prices for different international services. According to the FCC, "we [the FCC] proposed to base our benchmarks on TCP averages instead of relying on individual country TCPs because an averaging approach mitigates the effect of carriers' inefficient pricing structures on our benchmark regulations," see International Settlement Rates, *ibid.* at 19,850.

[329] R. Frieden, "Falling Through the Cracks: International Accounting Rate Reform at the ITU and WTO" (1998) 22-11 Telecom. Pol'y 963 at 966.

[330] International Settlement Rates, *supra* note 327 at 19,885.

[331] *Ibid.* at 19,901 -207.

The most interesting effect of this rulemaking is the consequences that the FCC attaches to foreign companies who fail to comply with the rules. Specifically, in case U.S. companies find resistance from foreign operators, the FCC will contact the "responsible government authorities" in order to express the U.S. concern about the lack of progress in this subject and will "seek their support in lowering settlement rates."[332] Indeed, if the foreign government fails to respond positively to the FCC inquiries, U.S. companies could be able to restrain payment of the settlement rates or pay only the proposed rates by the FCC. The FCC expects that foreign companies will not refuse to terminate international calls from the U.S. carrier because, even if they have to comply with the U.S. rates, these companies will still make some benefits.[333] Therefore, the FCC is imposing its standards on foreign companies counting on the attractiveness of the American market for the rest of the world.

a. Reactions From Outside the U.S.: Cable & Wireless v. FCC

There have been many reactions since the enactment of the International Settlement Rates Order. For many governments, the imposition of benchmarks by the FCC means a violation of national sovereignty and an extraterritorial exercise of jurisdiction. Indeed, opponents sustain that the FCC is violating the MFN and national treatment concepts by imposing conditions to foreign carriers associated with whether or not the accounting rate that they pay is above or below the FCC's benchmarks.[334] The recent case Cable & Wireless v. FCC[335] is illustrative of this adverse reaction. Decided on appeal in January 12, 1999, the case

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[332] *Ibid.* at 19,893 -185.

[333] J.J. Alissi, *supra* note 261 at 505.

[334] R. Frieden, *supra* note 329 at 967.

[335] See *Cable & Wireless v. FCC*, *supra* note 294.

involved a group of foreign telecommunications companies against the FCC and its regulations imposing maximum settlement rates.

Petitioners and parties, representing over a hundred foreign governments, regulators, and telecommunications companies claim against the above-related order,

> that the FCC, by limiting the settlement rates that foreign carriers may charge U.S. carriers, has asserted extraterritorial jurisdiction over foreign carriers and foreign telecommunications services, thereby exceeding its authority under the Communications Act and the International Telecommunications Union Treaty. Petitioners further argue that even if the Order does not regulate foreign carriers, it unlawfully regulates domestic carriers by restricting the prices they may pay to non-FCC-regulated entities. Petitioners also argue that the benchmark settlement rates are arbitrary, capricious, and unsupported by substantial evidence, and that the Commission's restrictions on foreign-affiliated U.S. carriers are unlawfully discriminatory and inadequately justified.[336]

First, according to petitioners, the controversial order imposes the discussed benchmarks to foreign carriers and makes them the object of enforcement actions by the FCC. In its defense, the FCC argues that its order is not regulating foreign carriers, but domestic carriers and the settlement rates that domestic carriers may pay. On this point, the Court decided that they "must sustain the Commission's view as long as the Order reasonably represents an exercise of its statutory authority to regulate domestic carriers engaged in foreign telecommunications."[337] For the Court, petitioners have focused only on the effect of an internal regulation for foreign countries.[338]

Indeed, according to the Court, the Commission's Order does not violate "the International Telecommunication Union Treaty regime, [and the] International

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[336] *Ibid.* at 1229. There is a fourth claim against the FCC, by Telstra Corporation, regarding Internet-related telecommunications services.

[337] *Ibid.* at 1229.

[338] *Ibid.* at 1230, "the Commission does not exceed its authority simply because a regulatory action has extraterritorial consequences."

Telecommunications Regulations,"[339] because these regulations state that any member has the right to ask under national law for recognition of the administrations and private operating agencies providing an international telecommunication service.[340] Moreover, the Court agrees with the Commission that "[t]he right to authorize a carrier to provide service in a given country necessarily includes the right to attach reasonable conditions to such authorization," if it is necessary in order to safeguard the public interest.[341] Therefore, the Court's final argument represents the Commission's need of protecting the public interest.

Second, petitioners argue that the Commission lacks authority to impose the prices that carriers can pay for termination services. The Court also denies this petition, basing its decision on three provisions of the Communications Act which, according to the Court, give "expansive powers" to the Commission.[342] Of particular interest is section 201.(b) which provides that,

> All charges, practices, classifications, and regulations for and in connection with such communication service [interstate or foreign communication by wire or radio], shall be just and reasonable ... The Commission may prescribe such rules and regulations as may be necessary in the *public interest* to carry out the provisions of this chapter.[343]

Therefore, the FCC has still mechanisms to protect the internal market in order to safeguard the public interest.

Lastly, of notable significance are the petitioners' objections to the conditions imposed to foreign-affiliated companies. As mentioned above, the order requires that these carriers have to apply the FCC's benchmarks immediately, not giving them the period from one to four years that domestic carriers have. Petitioners argue that this measure is discriminatory. Moreover, although

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[339] The writer of this thesis assumes that the Court is making a reference to the ITU Convention and Constitution, since the International Telecommunication Union Treaty does not exist.

[340] ITR, *supra* note 158 at Art. 1.7. (a).

[341] International Settlement Rates, *supra* note 327 at 19,950, as cited by *Cable & Wireless v. FCC*, *ibid.* at 1230.

[342] *Cable & Wireless v. FCC*, *supra* note 294 at 1232.

[343] *Communications Act 1934*, supra note 99 at s. 201, [emphasis added].

the decision does not mention it, the claim could be formulated as a violation of the U.S. obligations of national treatment. The Court stated that the risks of price squeeze by these companies are enough to allow the FCC to impose preventive measures in order to protect the competitive market.

b. Accounting Rates and ITU

As mentioned above, the WTO did not treat the accounting rate system issue. This fact leaves the ITU as the main international forum for achieving reform, which nonetheless makes complete sense due to the traditional expertise of this organization. In this respect, the ITU has recognized for a number of years the current problem of the accounting rates which, for the organization, stems from the fact that these rates are not cost-based.[344] In words of Mr. Pekka Tarjanne, previous Secretary-General of the organization, "if we follow the logic of the liberalization, ...any reform of accounting rates should attempt to bring international telecommunications into a trade liberalization framework. Indeed, any new system would need to be transparent, non discriminatory, and cost-based to meet the requirements of the World Trade Organization (WTO)."[345]

The activity of the ITU on this subject was only directed to establish standardized rules until the beginning of the 1990's. However, the ITU has hosted several experts meetings on this subject. The most notable among them is the Informal Group of Experts on the topic of accounting rate reform and the Seventh Regulatory Colloquium. The Informal Group of Experts met several times in 1996 and 1997 and recognized the urgency of reform of these systems.

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[344] P. Tarjanne, "How will the accounting rate system need to be modified in a liberalized market?" *ITU Newsletter* 9 (1996), Inside Info., online: ITU <http://www.itu.int/plweb-cgi/fastw...%20the%20Telecommunication%20Union> (date accessed: 29 May 1999).

[345] *Ibid.* at 2.

Moreover, the group expressed concerns about unilateral actions like the FCC's benchmarks regulation analyzed above and it also concluded that a cooperation between the ITU, the WTO, and national regulatory agencies was necessary in order to give countries the support they need in order to adapt their legislations.[346] Although the group did not recommend making any structural changes to the current system, it did recognize that it was essential to move quickly towards cost-based prices for international calls and that many systems will probably exist side-by-side.[347]

During the Seventh Regulatory Colloquium, a group of experts met in Geneva for three days in 1997 with the goal of formulating practical advice on this subject for policy-makers and regulators.[348] The Colloquium concluded that the accounting rates are not the fundamental problem, or at least not the only one. The main problem is the lack of network infrastructures on developing countries, due to inadequate investment, monopolistic structures, and the lack of a clear regulation.[349]

Otherwise, the main ITU's role in this subject is developed through the Telecommunications Standardization Sector, where Study Group 3 is in charge with creating a framework with revenue-sharing mechanisms for international carriers. An important action in this sense is Recommendation D.140 from the Telecommunications Standardization Sector, which recommends the adoption of settlement rates adapted to the actual cost of the provision of

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[346] ITU, *Informal Expert Group on International Accounting and Settlement Reform Background documents*, online: ITU <http://www.itu.int/intset.htm>.

[347] P.A. Stern & T. Kelly, *supra* note 287 at 23ff.

[348] ITU, *The Changing Role of Government in an Area of Telecom Deregulations. Transforming Economic Relationships in International Telecommunications* (1997) Report of the Seventh Regulatory Colloquium, Geneva, 3-5 December 1997. Online: ITU <http://www.itu.int/itudoc/osg/colloq>.

[349] D.M. Leive, "The Accounting Rate Crisis: What is the Real Problem?" *ITU News* 2 (1998) 28 at 29.

the service.[350] Although this is not completely new since a similar provision in the International Telecommunications Regulations already exists, this document concludes that administrations should seek to agree on reductions on the accounting rates in a period from one to five years. Recommendation D.140 also introduces guidelines about the elements to be taken into account when determining the cost of accounting rates and about the bilateral negotiations where these rates are established. For instance, it recommends that these negotiations "should be conducted periodically, for example on an annual basis."[351]

2. Foreign Participation in the U.S. Market

Another element regarding the United States regulatory obstacles for foreign companies entry is the traditional foreign ownership restrictions. Historically, Article 310 (b) of the Communications Act of 1934 restricted the entry of foreign companies, prohibiting ownership of an American communications operator by a corporation that is directly controlled by a foreign corporation or government, or by a corporation that is more than twenty-five percent of its voting stock owned by such foreign entity.

The Telecommunications Act of 1996 amends the Communications Act of 1934. This act does not eliminate the foreign ownership impediments but introduces some modifications in Article 310 (b) of the Act. Specifically, it deletes the fragment forbidding corporate ownership if

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[350] ITU, *Accounting Rate Principles for International Telephone Services*, ITU-T Rec. D. 140 (Geneva, 1992, revised in 1995 and 1998), online: ITU <http://www.itu.int/intset/itu-t/d140/d140_e_rev.htm>. The text recommends as principles that "accounting rates for international telephone services should be cost-orientated ... [and that] each administration should apply the above principle to all relations on a non-discriminatory basis."

[351] *Ibid.* at Annex C.

"any officer or more than one-fourth of its officers or directors is an alien."[352] Therefore, the limitations on foreign officers disappear, but the rest of restrictions remain.[353]

Otherwise, there are other aspects to consider in the U.S. policy. Traditionally, the Communications Act of 1934 established the standards for the FCC to regulate telecommunications. Indeed, the FCC had to issue licenses according to the "public convenience, interest, and necessity" criteria.[354] It was for the FCC to determine if each applicant complied with these public interest criteria, which are not very clear. However, the FCC could grant a waiver for an application that does not meet all the requirements but comply with the public interest goal.[355] Under this condition, therefore, the FCC could waive foreign ownership restrictions existing another interest. However, the applicant had to demonstrate to the FCC that it deserved the waiver because its action would serve a benefit to the public.[356]

After the entry into force of the Basic Telecom Agreement, the FCC has maintained the same public-interest standards. Article 214 of the Telecommunications Act obligates companies to obtain authorization from the FCC to install new telecommunications lines within another State. The provision establishes that the FCC will authorize this installation if it finds it in

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[352] *Telecommunications Act of 1996*, Pub. L. No. 104-104, S. 652, 104th Cong., 1st Sess. (1996), art. 403 (k)(1).

[353] K. Schwarting Rose, "Note: Changing Frequencies: The Federal Communications Commission Globalizes the Telecommunications Industry with the Adoption of the WTO Agreement" (1999) Minn. J. Global Trade 161 at 180. The new section 310 b (4) says: "any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or revocation of such a license.

[354] *Communications Act 1934, supra* note *99. Ibid.* at 166.

[355] *Ibid.* at 167. This was established in *Federal Communications Comm'n v. Sanders Bros. Radio Station*, 309 U.S. 470 (1940) at 476.

[356] *United States v. Storer Broad. Co.*, 351 U.S. 192 (1956) at 201-202; *ibid.* at 168.

accordance with public interests. Moreover, as this regulation ceased its application to domestic carriers in 1996, it could as well violate national treatment provisions. Through this provision and section 310 mentioned above, the FCC applies what is called the "market-power test," that is, the FCC can deny entry into the U.S. market of foreign carriers' affiliates if it poses a "very high risk to competition." According to some authors, this will not violate the Basic Telecom Agreement obligations because this regulation is enacted against dominant carriers. The problem arises, however, on the broad discretion given to the FCC which is not well defined by antitrust principles but justified by "public interest" reasons.[357]

[357] T. Takigawa, *supra* note 326 at 45ff.

Conclusion

Satellite Telecommunications have seen the eruption of thousands of companies trying to make economic benefits. This can be stated as a global phenomenon that affects other sectors as well. International economic relations are evolving day by day with different mergers and fusions that change the scenario. Not only have these mergers proliferated, but also the traditional intergovernmental organizations such as INTELSAT and INMARSAT are being privatized. The reason behind this move is their desire to attract investment in order to quickly develop the expensive telecommunication infrastructures and to compete with their new competitors that are now able to offer global communications. The rationale to this movement is the change in the concept of international relations. 'Privatization' can apply to everything.

Indeed, the traditional public principles that were associated with certain State functions have lost some strength in economic relations. This change of concept similarly reveals itself through other experiences such as the end of national monopolies and the decrease of national barriers for the operation by foreign operators. However, the following issue remains: what happens with the concept of "international public service," a principle behind these organizations? It can be considered logical that these organizations want to operate now as commercial operators and obtain more revenues. However, the traditional public services that these organizations have been granting should be protected somehow.

The issue to consider is, who should control international telecommunications? Indeed, should any organization control them? This thesis has shown a number of problems derived from the complexity of regulations and the speed of their change. The WTO is by nature invested with the ideas of liberalization and privatization. Indeed, its purpose is precisely to apply these last

principles to trade. The Basic Telecom Agreement served the purpose of accelerating the beginning of the end of national barriers. The advantage of the agreement is that from now on the commitments assumed by each country will be clearly established in its National Schedule, introducing more clarity regarding its barriers for foreign carriers. However, their rules possess certain flaws. The Reference Paper incorporating competitive safeguards appears too vague, overall introducing the criteria of transparency for States. An assertive step for the future would be to better define the terms of the reference paper in order to avoid abuses from national regulators. A means to achieving this end would be to control exactly which exceptions the State can impose when granting a license, or what exactly falls under the traditional "public interest" exceptions that States usually keep. Another potential advance could be to link results to the measures compromised according with the text, such as some sort of responsibility for delays in granting a license when the time for that was established by the State.

The United States' own regulation of the accounting rate problem demonstrates though, how the liberalization of telecommunications will not obviously imply the loss of market control by States, moreover taking into account that the country in question is the U.S. The conflict of the international calls and the remaining regulation about foreign operators' entrance shows that the U.S. still has mechanisms to protect its market and companies. Indeed, the remaining system for settlement rates appears to be one of the only cases that developing countries have to bring back revenues to their telecommunication operators.

The leading role of the United States on the international economic relations has become clear through this study. This country extremely influences the evolution of every episode that has been studied, since the privatization of INTELSAT, to the negotiations of the WTO Agreement, where they kept a constant dialogue with multiple participants in order to accelerate their adoption of commitments for the liberalization of their telecommunications. The accounting

rate problem is another case where, after not getting its inclusion in the text of the agreement, the U.S. decided to act by itself.

The influence of these privatization and liberalization trends on the ITU was not evident, since its purposes and grounds were completely different. However, the study of the current procedures of functioning and the organization efforts to change them have shown that even a movement for privatization could affect this organization. As a matter of fact, that is probably the future of the organization. The organization is witness of an increasing participation of the private sector. As mentioned in this study, along with the 188 Member States, the organization embraces about 500 private operators. Indeed, ITU is already establishing fees for the filing of satellites and advising or warning that the granting of rights to private members will come linked with obligations, probably financial. In this respect, it is not realistic to talk about giving more powers to this organization or strengthening its international authority when the financial contributions to its budget are formulated in the ITU Convention on a voluntary basis.[358]

It remains essential to modernize the ITU procedures and to give to the organization more enforcement powers regarding mainly the attribution and registration of frequencies and orbital positions. It is interesting to bring here the discussion paper presented by Prof. F. Lyall in Unispace III this July 1999.[359] This international discussion forum has revealed many of the issues that this study has discussed thoroughly. As Prof. Lyall did before, he calls for the application of the international law doctrine of implied powers to the ITU. According to that theory, ITU would not only have the powers expressly conferred, but also the powers required to comply with its functions. Agreeing with this author, the ITU should be granted more powers, but the reasons for this statement are different from Prof. Lyall's reasons. In this sense, according

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[358] Art. 28 ITU Convention, *supra* note 151.

[359] F. Lyall, "International Telecommunications" (Discussion Paper, Unispace III, International Institute of Space Law Workshop Session 3, Vienna, Austria, 21 July 1999) [unpublished].

to the scholar, ITU should be granted more powers in order to examine notifications of orbital positions and frequencies by States and decline them in certain cases, for example, of no clear relationship of the company with the State (flags of convenience) or an excessive number of applications.[360]

By contrast, this thesis has sustained that ITU should benefit from a stronger power but not for the previously mentioned reasons. First, the idea of denying notifications for registration of orbital positions by the ITU because of a lack of enough contact with the State would be extremely difficult to implement. Agreeing with Prof. R. Jakhu, implementing that idea would be close to admitting that the State is unable to fulfill its international obligations. The sovereignty of the States would not allow for this power in the ITU.[361]

The bottom line of this discussion is the approval or disapproval of the concept of trading with space resources. How this study has demonstrated, trading with space resources already exists. States have already leased orbital positions and introduced auctions mechanisms for their attribution. Moreover, trading will continue. Therefore, the question is the participation of the ITU on this process. The attribution of more powers to the ITU could be for the organization to regulate this trading of orbital resources. Indeed, it is interesting to consider the establishment of a similar regime such as the Authority established for the deep-sea resources. Although it is too early to judge the functioning of the law of the sea regime since the Convention just entered into force on 1994, the idea seems interesting since it would not require the creation of another organization.

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[360] As mentioned before, what Prof. Lyall criticizes is the possible proliferation of cases as the Tongasat issue of some years ago. In his view, the IFRB already used the doctrine of implied powers when it refused the number of applications of Tonga, due to the fact that the ITU provisions states only the possibility of refusal of notifications on technical grounds, and in this case the IFRB did it because of its number.

[361] R.S. Jakhu, "Comments on Prof. Francis Lyall's Paper," *supra* note 359.

It could be accomplished simply by continuing in the current direction with the attribution of more participation to private operators, the establishment of fees and administrative due diligence, and essentially, giving control powers to the ITU. The ITU would have the important function of guaranteeing part of these resources to cover services in developing countries. Indeed, with more enforcement powers, the ITU could put into practice ideas like giving preference to the attribution of frequencies and orbital positions to bodies that offer services categorized as "public."[362] A modification of the traditional principle "first come, first served" could be done by this way if, for example, INTELSAT and INMARSAT continue with a part of their public services once they are privatized. Moreover, it appears essential to give these powers to the ITU in order to guarantee this public service aim. The reason is that the increase of actors and the privatization is jeopardizing the traditional respect of these principles and there is no other organization existing that will be able to act as a guardian of them. The WTO, of course, will not function in this role.

Is the cooperation between WTO and ITU possible? It appears too difficult to be achieved at the moment. Given the complexity of both organizations' subjects, a cooperation between them in certain matters would be more than desirable. The issues that call for such cooperation are licensing, technical matters in which the ITU has a recognized experience, such as accounting rates and spectrum management procedures, and interconnection agreements. For instance, in the problem of accounting rates, the ITU has just enacted some recommendations, while the WTO did not treat the subject. A potential cooperation could use the technical expertise of the ITU for the settlement of certain principles by the WTO in order not to leave the subject completely to the U.S. actions mentioned above.

[362] This proposal was also discussed in Unispace III, see *ibid.*

However, the most interesting field for a potential cooperation would be in cases of satellite disputes. Who will deal with States' conflicts? It is obvious that the increase of actors will result in an increase of conflicts, even if until now there was just one international conflict resulting from activities in outer space, the case of Cosmos 954.[363] In case of a satellite dispute, is the WTO going to solve it through the establishment of a traditional panel? Or will the ITU solve the conflict? With regard to the ITU, its procedures cannot be characterized as very efficient. The system of resolution of controversies that the ITU Constitution contemplates relates to "negotiation, through diplomatic channels, or according to procedures established by bilateral or multilateral treaties."[364] Although there is also recourse to arbitration, this is not binding. As a matter of fact, the current procedure is the use of bilateral resolutions between administrations. Moreover, there is an ITU Optional Protocol on dispute settlement not signed by all ITU members that has never been applied.

Therefore, in case of an economic conflict over an orbital slot in the future, for instance, the WTO would be a more appropriate forum for the resolution of any problem between States, but always counting on the expertise of the ITU. Without underestimating the WTO, their experience in frequency and orbital management and other satellite telecommunications matters is not very relevant. Subsequently, a potential solution could be the provision of experts from the ITU for their incorporation on possible panels of the WTO.

Of course, the idea proposed in Unispace III about the creation of an international communications agency or organization to act as an international regulatory body is the most perfect solution to deal with these problems. This organization would take the expertise of the

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[363] The malfunctioning Soviet satellite Cosmos 954 fell in Canadian territory in January 1978, causing a Canadian claim against the Soviet Union for compensation for damages caused. The conflict finished with the signature of a protocol between the two States, fixing a compensation of $ 3 million. See E.G. Lee, "Liability for Damage Caused by Space Debris: The Cosmos 954 Claim" (1988) 26 Can. Y.B. Int'l L. 273.

ITU and the WTO but the establishment of such an organization at the moment seems to be very remote. It would be more realistic to try to address ITU's faults provided that the States want such an action.

[364] Art. 56 ITU Constitution, *supra* note 151, *Settlement of Disputes.*

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