THE LAW ON INTERNATIONAL TELECOMMUNICATIONS AND BROADCASTING: NEED FOR DEVELOPMENT OF THE EXISTING REGIME?

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Abstract

The law on international telecommunications and broadcasting derives its substratum from international space law. However, at the time when the Outer Space Treaty was drafted, the involvement of private corporations in activities related to outer space was not envisaged. Therefore, with the rapid technological as well as commercial advancement, the doctrines envisaged by the five major space treaties and the related principles have become redundant in so far as their application to telecommunications and direct satellite broadcasting is concerned. Hence, there is a need to revisit Article VI of the Outer Space Treaty if the activities of autonomous bodies like INTELSAT are to be governed. In this regard, the provisions of the ITU Constitution appear to be an

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improvement over the Outer Space Treaty. The World Trade Organization also has a pivotal role in formulating and administering laws on telecommunications. However, the GATS Annex on Telecommunications and the Reference Paper are not devoid of ambiguities. Furthermore, the role of the UNCOPOUS and the International Telecommunication Union in the allocation of frequencies and orbital positions is questionable at best, since such a practice would tantamount to national appropriation. Professor Stephen Gorove's counter misses the point in the sense that he fails to take into account the use of nuclear powered satellites. In this regard, the author states that the International Telecommunication Union must be conferred with extensive powers to deregister or cancel a particular allotment in case a more efficient proposal is made by another state. This would check continued national appropriation as well as provide opportunities to developing states thereby justifying the statement that outer space is a "province of all mankind".

I. INTRODUCTION

As we stand at the threshold of the twenty-first century, we can admire the advancement made in field of telecommunications and the benefits accrued to mankind as a result of such progress. This development has catapulted the human society to an unprecedented

level of progress within a short span of time. With the advancement of research and exploration activities in the outer space, this new arena was gradually put to commercial use and one of the first such uses was the use of satellite technology to accentuate telecommunication mechanisms. With the successful launching of the Telstar I satellite and the establishment of the Communication Satellite Corporation (hereinafter referred to as "**COMSAT**") by the United States of America, several states at the European Conference in Satellite Communication (hereinafter referred to as "**CETS**") entered into talks with the United States to foster transnational cooperation for the purpose of the development of a commercial communication satellite system.[1] This resulted in the formation of the International Telecommunications Satellite Consortium (hereinafter referred to as "**INTELSAT**") and the subsequent launching of the Intelsat I or the *Early Bird* in the year 1965. This consortium was later converted into a corporate body responsible for providing fixed satellite services. By virtue of multilateral agreements administered by the International Telecommunication Union (hereinafter referred to as "ITU") and the INTELSAT, the market for communication services and technology had increased manifold to $ 550 billion by the end of 1988,[2] and $ 1.5 trillion by 2012.[3] Therefore, with the increase in the commercial uses of the outer space as well as the extensive participation of private space activities, it is imperative that the legal mechanism relating to telecommunications is efficient enough to deal with the recent developments.

[1]Council of Europe, *Consultative Assembly, Committee on Science and Technology Report on Long-Term Prospects of Space Exploration for Europe* (rapporteur: Mrs. Maxsein), Doc. 2517 at 34 (Jan. 16, 1969).

[2]PETER F. COWHEY, WHEN COUNTRIES TALK: INTERNATIONAL TRADE IN TELECOMMUNICATION SERVICE (Cambridge, Mass.: Ballinger Publishing Co., 1988).

[3]*Telecommunication Services*, http://www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_e.htm.

This paper shall firstly analyse the evolution of the international law on telecommunication. In this part, the constitution and the role of various intergovernmental bodies shall be discussed. Thereafter, I shall proceed to identify a number of legal issues pertaining to the international telecommunications regime. One of the major concerns pertains to Article VI of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 1967[4] (hereinafter referred to as "**Outer Space Treaty**") with regard to the responsibility borne by states for the activities carried out in outer space. However, with intergovernmental bodies like the INTERSPUTNIK and private entities like INTELSAT carrying out activities in outer space, the extent and scope of application of parts of Article VI of the Outer Space Treaty remains somewhat unclear.

The third part of this paper shall seek to analyse the interplay between the law on international telecommunications and world trade law, with special focus on the GATS Annex on Telecommunications and also the Agreement on Basic Telecommunication Services. Thereafter, this paper shall explicate the concept of the electromagnetic spectrum as a natural resource and the role of the WTO in this regard. Direct Satellite Broadcasting being an important segment of international telecommunication shall also form an area of discussion. The DBS Principles also ignore the responsibility of private players and Principle I despite its attempt to encourage international cooperation fails miserably as it merely reproduces the text of Article IX of the Outer Space Treaty thereby attracting the very issues facing Article IX. The paper also strives to resolve issues relating to national security involved in DBS by resorting to the object and spirit of international space law. This paper also strives to look into the problems of equitable allocation of spectrums and orbits

[4]UN Doc. 2222 (XXI) (1967).

considering that these resources are limited in nature, in view of the principles laid down in the ITU Constitution.[5] This area shall be dealt with keeping in mind the principles of the common heritage of mankind, since it espouses the sustainable use and conservation for meeting the needs of future generations. Last, but not the least the author shall also address the issues of exploitation of orbital resources, the interests of the developing countries in this regard and the problems with the text of the concerned laws. Towards the end, the paper shall conclude by arguing in favour of an inclusive system and a comprehensive regime of international telecommunications taking into account the needs of developing countries and also the future generations in the light of the Outer Space Treaty and other principles of international outer space law.

II. THE EVOLUTION OF THE LAW ON INTERNATIONAL TELECOMMUNICATION: A LOOK AT THE VARIOUS INTERGOVERNMENTAL BODIES

A. International Telegraph Union

The development of international laws governing outer space activities were for the first time started with the transnational discussions relating to radio frequencies in the year 1959, when the ITU Radio Regulations were amended to include frequency allocations for newly designated radio telecommunication services

[5]Constitution and Convention of the International Telecommunication Union, July 1, 1994, 1825 UNTS 1826 art. 44 [hereinafter I.T.U Constitution].

and the conditions on the use and exploitation of those frequencies.[6] The roots of these regulations of telecommunications can be traced back to the establishment of the International Telegraph Union in 1865. The International Telegraph Union was one of the earliest examples of international co-operation. The convention establishing this body provided *inter alia,* for the right of everyone to "correspond by means of international telegraph" and emphasized on the secrecy of such conversation and also the need to have a uniform set of tariffs and regulations.[7] Soon, the privileges under these regulations were accorded to private telegraph entities as well.[8]

B. The International Radiotelegraph Union

The International Radiotelegraph Union was another body which was born as a result of the multi-national interests,[9] to regulate practices of certain monopolistic entities in the radiotelegraph industry. This was a result of the International Radiotelegraph Conference held at Berlin in 1906.[10] One of the foremost agendas of the conference which was also adopted by this convention was Article 3 which required the coastal and ships stations to exchange wireless telegrams without any discrimination on the ground of the telegraph systems used by such stations. This was in response to the practices carried on by the Marconi Wireless Company which used its monopolistic presence in that particular market to enter into agreements with various shipping companies to provide them with radio operators and also conferred

[6]J. Henry Glazer, *The Law Making Treaties of the International Telecommunication Union through Time and in Space,* 60(3) MICH. L. REV. 292 (1962).
[7]*International Telegraph Convention of Paris*, 56 BRIT. & FOR. ST. PAPS. 294(1865).
[8]*Vienna Telegraph Convention,* 59 BRIT. & FOR. ST. PAPS. 322(1868).
[9]It is to be noted that the Berlin Radiotelegraph Conference of 1906 was attended by at least the representatives of twenty seven states across the world.
[10]International Radiotelegraph Convention Nov. 3, 1906 https://search.itu.int/history/HistoryDigitalCollectionDocLibrary/4.37.57.en.100.pd.

upon itself the right to refuse communication with any ship or station not using the patented devices. Such practices were found to be hampering the utility of telegraph communications, hence the aforesaid provision along the lines of Article 1 of the preliminary convention[11] sought to prevent the creation of monopoly in favour of a single entity. The Convention and the rules framed thereunder prescribed technical standards for the devices and the apparatus put to use with an aim to reduce interference. The Berlin Radiograph Convention was revised in 1912. Although, several attempts were made to make the use of radio sets in ships after the disaster of the RMS Titanic, such an agreement could be fructified only in the first Safety of Life at Sea Convention.[12] However, despite these amendments, the Convention was not comprehensive enough to deal with the emerging problems. Therefore, delegation from 30 countries across the world met in Washington in the year 1927 to discuss the possibilities of incorporating further amendments to the existing Convention. This Convention, *inter alia*, propounded the method of allocation of frequencies to telecommunication service providers rather than countries.[13] The Berlin and the London Radiotelegraph Regulations referred to the bands in terms of 'kilocycle'. Thus, after the conference at Washington, the channels from 10 to 100 kilocycles per second were reserved for long distance services, channels from 100 to 500 for ship and aircraft services and 500 to 1500 for broadcasting.[14]

[11]*Preliminary Conference on Wireless Telegraphy 1903*, ITU, https://www.itu.int/en/history/Pages/RadioConferences.aspx?conf=4.35.
[12]*Safety of Life at Sea Convention*, 108 BRIT. AND & FOR ST. PAPS. 283.
[13]Stewart, *The International Radiotelegraph Conference at Washington*, 22 A. J. INTL. L. 28, 48 (1928).
[14]*Supra* note 7, at 279.

C. The International Telecommunication Union

The subsequent meeting of the delegates at Madrid in 1932 resulted in the formation of the ITU as a result of the merger of the two pre-existing treaties- Telegraph Convention and the Radiotelegraph Convention. This was a comprehensive structure embodying rules relating to telegraph, radio and the telephone. The ITU later went on to become a specialized body of the United Nations Organization (hereinafter referred to as "UN") in the year 1949.[15] The ITU is itself structurally divided into various component organs which are as follows:

- The Plenipotentiary Conference which is an important body concerned with decision making and chalking out the strategic map of the ITU meets once every four years. The Plenipotentiary Conference is also actively involved in the election of the office bearers of the ITU. The next Plenipotentiary Conference is scheduled to be held at Busan in the Republic of Korea in 2014.
- Administrative Conferences, where member states of the ITU met to propose and discuss changes to the existing regulations.
- The Administrative Council which is associated with the administrative work of the ITU.
- There are four more permanent bodies: The general secretariat, the International Frequency Registration Board (hereinafter referred to as "**IFRB**"), the International Radio consultative Committee (hereinafter referred to as "**CCIR**"), the International Telegraph and Telephone Consultative Committee (hereinafter referred to as "**CCITT**").

[15]Agreement between the International Telecommunication Union and the United Nations, Apr. 26, 1949, 30 U.N.T.S. 315.

The IFBR has been entrusted with the responsibility of implementing frequency allocation plans and registering frequencies.[16] States assign particular wavelengths to various private entities for the purpose of carrying out broadcasting operations within the respective state. These assignments made by the states are registered with the IFRB. The objectives of the ITU are implemented by periodic ITU Conferences and also previously through its worldwide and regional World Administrative Radio Conferences (hereinafter referred to as "**WARC**"). One of the major and the most important conferences of the ITU has been the one held in 1979 at Geneva. The conference of 1979 whose decisions, having the force of an international treaty, still continue to have a decisive influence on the development of all types of radio communications and broadcasting to this day. This radio conference was the first one in twenty years to examine and completely modify the main document of the radio sector, the Radio Regulations, in order to meet new challenges of rapidly changing radio technology and to provide a better sharing of spectrum and orbit resources among developed and developing countries.

The WARC-79 resulted in the following outcome:

- There was a significant change in the allocation of frequencies and the procedures involved in the implementation of these modifications.
- New approaches were formulated for aiding the developing countries in accessing spectrum.
- It was decided to conduct conferences to discuss space activities and short wave broadcasting.
- Agreements were reached on the expansion of short wave spectrum allocated for broadcasting.

[16]Glazer, *Infelix ITU- The Need for Space Age Revisions to the International Telecommunication Convention,* 23 FED. B. J. 1 (1963).

Some of the decisions arrived at by the countries at the WARC-79 are valid to this date, such as the call for having a standard mechanism for regulating the radio spectrum and space activities connected thereto, framing standards for efficient operation of these technologies by means of international cooperation and working towards bridging the technological gap between the developed and the developing countries. However, in 1992 at the *Additional Plenipotentiary Conference* in Geneva the ITU was restructured and as a result from 1993 the conference became known as the World Radio communication Conference or simply the WRC.

D. The United Nations Education Scientific and Cultural Organization

The United Nations Education Scientific and Cultural Organization (hereinafter referred to as "**UNESCO**") also has been playing a pivotal role in the international telecommunications, with its first action in this regard dating back to 1948, when a resolution recognizing the right of the public to access broadcasts from across the world was recognized.[17] Subsequent resolutions in 1969 in favour of the use of space communications and the 1972 Declaration of Guiding Principles on the Use of Satellite Broadcasting for the Free Flow of Information, the Spread of Education and Greater Cultural Exchange[18]. However, the latter was subject to severe criticism on the grounds of loose wordings used therein and also as going against the general stand of the UNESCO which was in favour of free flow of information. One of the primary reasons for such a consideration was the requirement of consent of the receiving state to broadcasting of

[17]UNESCO, Records of the General Conference, 3rd Sess., Vol. 2 UNESCO Doc. 3C/Resolution 7.2221 (1959).
[18]UNESCO, Records of the General Conference, 17th Sess., Vol. 1 UNESCO Doc. 17C/Resolution 4.111 (1972).

data. This was however, supported by other superpowers like the Soviet Union and France.

III. LEGAL TEXTS OF THE ITU: THE CONSTITUTION & THE CONVENTION

In the light of the above discussion, it is clear that the ITU plays a pivotal role in the field of telecommunications. The composition and the functioning of the ITU are determined by the ITU Convention, the ITU Constitution, and the Administrative Regulations.[19] Article 4.2 of the Constitution stipulates that it shall remain the principal document of the Union and that the Convention shall be supplemental to the Constitution. In the event of any discrepancy or conflict between the provisions of the Constitution and the Convention, the provisions of the former shall prevail over the latter.[20] The Administrative Regulations on the other hand are the regulations of the ITU and are binding on the member states to the ITU.[21] Therefore, a state is also obliged to ensure the compliance of these rules by any agency which may be authorised by the state to conduct international activities in telecommunication.[22] However, the ITU Constitution creates an exception in relation to military installations, wherein the member states are not bound by the regulations of the ITU.[23] The ITU Constitution puts forth a very important principle in Article 12 which

[19]I.T.U. Constitution, art. 4.1.
[20]I.T.U. Constitution, art. 4.4.
[21]I.T.U. Constitution, art. 4.3.
[22]I.T.U. Constitution, art. 6.1.; Although it may be noted that by virtue of Article 51 of the Constitution, the supervision exercised by the states over the agencies may be subject to specific conditions fixed by the concerned state.
[23]I.T.U. Constitution, art. 48.

states that the functions of the Radio communication Sector shall be to ensure that all the radio spectrum resources are used efficiently, rationally and equitably by the services both in the geostationary orbit as well as in other orbits.

Another very significant issue presented by the ITU Constitution relates to usage of orbits. Article 44.2 of the Constitution envisages that the orbits must be used in an efficient manner, but taking into consideration the needs of the developing countries and the geographical position of certain countries. The reference to developing countries and the geographical situation was introduced by the ITU Nairobi Convention of 1982.[24] Various scholars on space law have previously contended that the indication about the situation of particular countries was not with a view to confer on any particular country preferential rights over others, but only to express a dissatisfaction towards the prevailing practice of *a priori* allocation.[25] However notwithstanding the emphasis on the needs of developing countries, orbital slots are allocated only on a 'first come, first served' basis with the exception of direct broadcasting satellites.[26] These inclusions by the convention were an aftermath of the claim made at the First Meeting of Equatorial States in Bogota in 1976, when Colombia claimed a specific part of the geostationary orbit above its territory, on the grounds that such an appropriation was alien to the scope of the Outer Space Treaty, 1967.[27] The concerned states claimed that "segments of [the] geostationary orbit [those over the

[24]International Telecommunication Convention, Nairobi, 6 November 1982, 1531 U.N.T.S 1.

[25]Stephen Gorove, *The Geostationary Orbit: Issues of Law and Policy*, 73 AM. J. INTL. L. 444 (1979), Ram Jakhu, *The Legal Status of Geostationary Orbit*, 7 AASL 333 (1982), G.O. Robinson, *Regulating International Airwaves: The 1979 WARC*,21 VIRG. J. INTL. L. 1 (1980).

[26]FRANCIS LYALL, SPACE LAW: A TREATISE 252 (Ashgate Publishing Co., 2009).

[27]Declaration of the First Meeting of the Equatorial States, Bogota, 1976, 6 J. SP. L. 193 (1978).

equator] are part of the territory over which the Equatorial States exercise their national sovereignty". A reason put forward by them was that the existence of the geostationary Orbit was a result of the gravitational pull emanating from their surface. This however, is nothing but a plain contradiction of the principle outlined by Article I and II of the Outer Space Treaty. The view of the countries was that the geostationary Orbit was being used contrary to the 'equitable use' principle enshrined by the ITU Convention and the developing countries were at a loss. In other words, an assertion of this kind would only highlight the failure of the Outer Space Treaty to define the limits of outer space.

IV. INTERNATIONAL TELECOMMUNICATIONS AND THE OUTER SPACE TREATY: A CASE OF THE PRIVATE ENTITIES

The Outer Space Treaty is the most comprehensive body of law concerning activities in outer space. However, one of the most significant problems in the Outer Space Treaty with regard to telecommunications is that of the principle of international responsibility enshrined under Article VI. The text of Article VI is as follows:

> "*States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space,*

> *including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space, including the Moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization.*"

One issue which may be pointed out in this regard is whether private bodies like the INTELSAT would be governed by the provisions of the Article VI. It is pertinent to note that although Article VI includes non-government entities and inter-governmental organizations into its ambit, but there is no mention about private bodies. The INTELSAT was an intergovernmental consortium until the year 2001, when few private equity firms took over and converted it into a private limited company, currently headquartered in Luxembourg and having offices across the world. Considering this proposition, it has been argued that non-governmental entities would include private bodies as well.[28] However, under Article VI, such bodies are required to be supervised by the 'appropriate party' to the Outer Space Treaty. In case of private body like the INTELSAT which has offices carrying out operations worldwide, the issue of appropriate country becomes a point of debate. Whether the country in which the company is headquartered shall be the supervising state or the country where the mission supervising office is situated or the country from whose territory the spacecraft is being launched is a matter of doubt. With regard to this problem, it is submitted that the countries in which all the offices involved in the space activity are situated may bear the

[28]J. FAWCETT, OUTER SPACE: NEW CHALLENGES TO LAW AND POLICY 51-79 (1984).

responsibility. This interpretation is in consonance with the nature and spirit of the provision as seen from the wordings applicable to intergovernmental bodies and this reading would also not impose unnecessary burden on a single state merely because of the fact that such a private body is headquartered in that particular state or because of the fact that such a country happens to be the launching state. In these circumstances, the text of Article VI of the Outer Space Treaty though laden with ambiguities becomes very crucial. The erstwhile INTELSAT would have squarely fallen within the meaning of Article VI, since it was an intergovernmental organization formed as a result of agreement between states without any independent corporate existence.

Furthermore the use of the term 'national activities' in Article VI only serves to compound the ambiguity. This is because a body like INTELSAT or INTERSPUTNIK would usually carry out activities in outer space on behalf of all the member countries. So, would 'national activities' only imply that such an organization be responsible only when it is involved in the sending or maintenance of a satellite of any particular country? Another question which props up is with regard to the applicability of this provision insofar as the sending or maintenance of a satellite in behalf of a private body is concerned. One view which is also shared by the Outer Space Act, 1986 of the United Kingdom implicitly points towards this interpretation by defining 'national activities' as activities carried out by that state or its nationals.[29] But, to put such an interpretation into the words of Article VI would again tend to leave an unfair result. Therefore, the most plausible interpretation of 'national activities' would be to interpret it as any activity carried on by or on behalf of any particular

[29]The Outer Space Act §2 (1986), See B. Cheng, *Whose Parking Space is it anyway? Mapping Out a legal Minefield in the Celestial Outlands*, The Times Higher Education Supplement 14 (30 May 1986, No. 789).

state or a number of states or any private entity. This would make all the member states responsible and would thus, fall in line with the principle of international responsibility envisaged by Article VI.

V. RECONCILING THE LAW ON INTERNATIONAL TELECOMMUNICATIONS WITH WORLD TRADE LAW

With the increasing participation of countries in this field, it could be seen that there has developed an intrinsic relationship between the law of international telecommunications and international trade law. The World Trade Organization (hereinafter referred to as "WTO") was a result of the Uruguay Round of Negotiations held in the year 1994. Prior to the birth of the WTO, a greater part of the international trade since 1948 had been administered by the General Agreement on Trades and Tariffs and the provisional secretariat. The General Agreement on Trades and Tariffs (hereinafter referred to as "**GATT**") is particularly relevant, owing to the trade in the equipment and terminals involved in relaying and conveying telecommunication signals. However, the General Agreement on Trade in Services (hereinafter referred to as "**GATS**") is more important in this respect, since it consists of certain obligations which are applicable to all the members of the WTO[30] as well as sector specific obligations applicable only to sectors liberalized by the member nations. The GATS came into operation in January 1995 as a result of the conclusion of the Uruguay Round of Negotiations. The GATS strives to protect the equality of opportunity for countries in world trade and seeks to foster liberalization of trade, albeit subject to the national

[30]General Agreement on Trade in Services, Jan. 1995, 1869 U.N.T.S. 183; 33 I.L.M. 1167 (1994), art. I [hereinafter GATS].

policy objectives of the WTO members.[31] The GATS comprises of general agreements, the annexes thereto and individual commitments listed in the schedules. Few of such horizontal obligations have been explicated hereunder:

- One of the primary obligations of members under the GATS is the Most Favoured Nation (hereinafter referred to as the "**MFN**") treatment which provides that a member state receiving foreign services must accord equal advantages to another state without any discrimination.[32] By virtue of this obligation, all states are prohibited from practising all forms of discrimination between services rendered by states.[33] However, Article II.2 provides that the member states may exempt themselves or refrain from undertaking these obligations in consonance with the Annex on Article II Exemptions. Therefore, several countries including the United States[34], Brazil[35], India[36] and Pakistan[37] have maintained exemptions concerning telecommunications. A more significant exemption in this regard is that of the European Union on audio visual services, implying no liberalization obligation on the members thereof.[38] However, it is pertinent to note that in instances where no specific commitments have

[31]GATS, Uruguay Round Final Act, Dec. 15, 1993, Annex 1B, GATT Doc. No. MTN/FA, 33 I.L.M. 1130 (1994).
[32]GATS, art. II.
[33]Appellate Body Report, *European Communities – Regime for the Importation, Sale and Distribution of Bananas*, 9 September 1997, WT/DS27/AB/R, para 234.
[34]WTO Doc. GATS EL/90/Suppl. 2.
[35]WTO Doc. GATS EL/13/Suppl. 1.
[36]WTO Doc. GATS EL/42/Suppl. 1.
[37]WTO Doc. GATS EL/67/Suppl. 1.
[38]European Communities and their Member States, Final List of Article II (MFN) Exemptions, WTO doc. GATS/EL/31 of 15 April 1994.

been undertaken, the MFN clause is a very significant obligation in this regard.

- Another very important obligation created by Article III under the GATS is the responsibility of maintaining transparency. Article III mandates all the member states of the WTO to publish all the domestic laws, rules and regulations which affect international trade in services to a great extent. The obligation of transparency is an essential aspect of international trade, since it permits market players to determine the regulations involved in this regard and also their applicability.[39] By the year 1997, all the member nations had created information sources to aid foreign market participants. This obligation has also found special mention in GATS Annex on Telecommunications.

The GATS also has provisions facilitating a multilateral system of settling disputes which may arise in connection to the compliance with obligations listed out in the annexes and the schedules. Although the earlier GATT had a system of dispute resolution, the orders could be blocked by countries losing the dispute and the dispute resolution process went on for a long period of time. Therefore, the GATS strives to redress these issues as well.

A. The GATS Annex on Telecommunications

Therefore, world trade law has also made deep inroads into the law of international telecommunications. The GATS Annex on telecommunications does not emphasize on the liberalization of the telecommunications market,[40] but merely adds generic obligations which apply to all the WTO member states. The main purpose of the

[39]Kern Alexander, *The GATS and Financial Services: The Role of Regulatory Transparency*, 20(1) CAMBRIDGE REVIEW OF INTERNATIONAL AFFAIRS (2007).
[40]GATS, Annex on Telecommunications, art. 1.

Annex was to bring to light the obligations of member states with regard to access and use of public telecommunications transport network. The definition of the term 'Telecommunications' as provided in the Annex, would attract any communication or the reception of signals with the involvement of an electromagnetic spectrum.[41] Therefore, scholars like David Luff have called for an explanation in this regard, since the transmission of signals by a cable also uses an electromagnetic spectrum.[42] The wordings used in the definition of "Public telecommunications transport network"[43] are also somewhat ambiguous considering the lack of clarity with regard to its applicability to cable networks.

An important aspect of the Annex on Telecommunications is that it creates an obligation on all member states to enable all service providers from other member states to have access to their public telecommunications infrastructure and permit the use of all public telecommunication services on a non-discriminatory basis.[44] Member states also are required to ensure that the service providers of other member nations have been permitted to purchase or take on lease equipment and also access cross border communications and information retained in databases.[45] However, it is to be noted that a member state has been given every right by virtue of Article 5(d) and Article 5(e) of the Annex, to impose conditions and measures on the access and use of public telecommunications network so as to inter

[41]GATS, Annex on Telecommunications, art. 3(1).
[42]DAVID LUFF, CURRENT INTERNATIONAL TRADE RULES RELEVANT TO COMMUNICATION SERVICES, THE WTO AND GLOBAL CONVERGENCE IN TELECOMMUNICATIONS AND AUDIO-VISUAL SERVICES 43 (Cambridge University Press, 2004).
[43]Article 3(c) defines "public telecommunications transport network" as 'the public telecommunications infrastructure which permits telecommunications between and among defined termination points.'
[44]GATS, Annex on Telecommunications, art. 5(a).
[45]GATS, Annex on Telecommunications, art. 5b(i), c.

alia, ensure the security and the secrecy of the messages and the technical integrity of the network.

The Annex on Telecommunications also outlines the principles of transparency and international cooperation. The Annex embodies the spirit of Article III of the GATS to a great extent, as it requires all information pertaining to access of public telecommunications network, tariffs and compliance requirements to be available.[46] Lastly, the Annex envisages vital cooperation between the developed and developing countries at the international as well as the regional level and mandates special preference to be given to suppliers from 'least developed' countries in this regard. The ITU and the International Organization for Standardization have thus been entrusted with the objective for fostering the objectives envisaged by the Annex.[47]

B. The Agreement on Basic Telecommunication Services

The Agreement on Basic Telecommunication Services was signed on February 15, 1997 between sixty nine countries of the world which sought to liberalize the global telecommunications sector which according to the then Director General of the WTO was more than $500 billion.[48] The agreement epitomizes nations undertaking additional obligations on scheduled sectors as provided in Article XVIII of the GATS. Therefore, the term "Agreement" has been said to be a misnomer, since this is essentially a list of specific commitment and exemptions submitted by the member countries.[49] As a Protocol, the commitments and exceptions listed here override

[46]GATS, Annex on Telecommunications, art. 4.
[47]GATS, Annex on Telecommunications, art. 7.
[48]WTO Press Release 67, *Rugiero Congratulates Governments on landmark Telecommunications Agreement* (Feb. 17, 1997).
[49]*Supra* note 43.

and amend any previous undertaking by the states. The agreement emphasizes on the inclusion of basic telecommunication services by the parties in their schedule of commitments. Explanatory notes issued on behalf of the Group on Basic Telecommunications define "Basic Telecommunication Service" as anything that

a. Encompasses local, long distance and international services for public and non-public use;
b. May be provided on a facilities-basis or by resale; and
c. May be provided through any means of technology.[50]

C. The Reference Paper

Towards the conclusion of the Uruguay Round in 1994, the member states formed a Negotiating Group on Basic Telecommunications (NGBT) to work towards the liberalization of the telecommunications market in consonance with the strategic framework of the GATS. A very significant development with regard to this agreement was the adoption of another separate set of commitments in the schedules known as the Reference Paper. The Reference Paper sets forth the definitions and the guidelines concerning the regulatory mechanism in basic telecommunication services, to be adopted by countries in transforming their respective telecommunication sectors to a competitive environment encouraging free market access to international players.[51] The obligations mentioned in the Reference Paper become binding on its members when the Reference Paper is included in its schedule of commitments.

[50]Note by Chairman, S/GBT/W/2Rev. 1, (16 Jan. 1997).
[51]Boutheina Guermazi, *Exploring the Reference Paper on Regulatory Principles*, The World Trade Organization, http://www.wto.org/English/tratop_e/serv_e/telecom_e/workshop_dec04_e/guermazi_referencepaper.doc.

One of the most prominent principles enshrined in the Reference Paper is the safeguard against anti-competitive practices.[52] The foremost reason behind the incorporation of this principle is to ensure that the commitments are not impaired by anti-competitive practices. Anti-competitive behaviour in this regard would include denial of access to network on commercial terms and also misuse of commercial information.[53] The terms of the Reference Paper with regard to antitrust policies govern only 'major' entities, since adoption of restrictive and abusive measures by these dominant service providers would hinder the principles of free market access of basic telecommunication services. The effort of the countries to negotiate a document to check anti-competitive practices is indeed commendable, since the Reference Paper is the first such document to coin a definition for the term 'major entities'. But at the same time, the scope of the definition is very general and loose in nature in the sense that it does not define the "power to effect the terms of participation". However, the Reference Paper has struck a balance as far as the definition of "essential facilities" is concerned. A very wide definition would have resulted in decreasing the efficiency of the market by allowing more number of firms and a restricted view of the concept would have hampered the competitive nature of the market and consumer welfare.[54]

The Reference Paper also throws light on the principles of transparency by virtue of Section 4, which inter alia, requires the publication of licensing criteria as well as the licensing conditions of individual permits be made available in the public domain. This

[52]Reference Paper, Negotiating Group on Basic Telecommunication Services, Art. 1, http://www.wto.org/english/tratop_e/serv_e/telecom_e/tel23_e.htm.
[53]OECD, *The OECD Report on Regulatory Reform, Volume I: Sectoral Studies*33 (Paris 1997).
[54]Alexander Larson, William Kovacic and Douglas Mudd, *Competitive Access Issues and Telecommunications Regulatory Policy*, 20 J. CONTEMP. L. 423 (1994).

principle is subsequently accentuated by Section 6 which envisages that the allocation of scarce resources like spectrums, right of way must be done in a "*transparent and non-discriminatory manner*".

D. The WTO and the Electromagnetic Spectrum as a Natural Resource

The electromagnetic spectrum is as much a natural resources like any other, although the spectrum is not depletable like minerals or petroleum. Therefore, an analogy has been drawn to a river, since a river may be used for various purposes but may never be depleted.[55] Similarly, a spectrum is never in itself depleted, but it may not be put to favourable use in case of interferences of overcrowding and employing the present technology only a sizeable portion of the spectrum can be put to use.[56] The geostationary orbit like the electromagnetic spectrum is also a limited natural resource. Although there is no measure of the number of satellites, the geostationary orbit can accommodate, estimates indicate the number to be anywhere between 180-2400 depending on variety of factors.[57] Therefore, it is imperative that a reasonable distance between the satellites have to be maintained in order to avoid collision and harmful interference.[58]

The era of modernization has resulted in the frequent use of wireless networks in lieu of wired ones. Therefore, this has gradually increased the demand for frequencies in the radio-electric spectrum, since wireless networks use the radio-electric spectrum. Several

[55]Christian A. Herter, *The Electromagnetic Spectrum: A Critical Natural Resource*, 25 NAT. RESOURCES. J. 651 (1985).
[56]*Id.*
[57]S*upra* note 27.
[58]Rothblatt, *The Impact of International Satellite Communication Law upon Access to the Geostationary Orbit and the Electromagnetic Spectrum*, 16 TEX. INTL. L.J. 207, 207-11 (1981).

procedures are involved in the assignment of frequencies. The first procedure is the allocation of frequencies at the international under the patronage of the ITU at the World Radio-communication Conferences. Although, there seems not to be any direct link between the allocation of frequencies and international trade law, however a violation of the principles of world trade law may be established if a discriminatory treatment is meted out to a country during the course of the negotiations, resulting in an impingement of the MFN obligations under Article II of the GATS.

Another procedure is the allocation of frequencies at the national level, wherein the procedures involve the auctioning by the state of frequencies within the allocated frequency band. This assignment by the state is done to service providers within the country where the service is meant to be provided. Trade law become equally important in the case of domestic allocation, especially trade barriers arising from onerous and unfair trade practices. However, under such circumstances, the applicability rules of trade law are subject to the specific commitments of the particular nation under the GATS. Therefore, trade law under such circumstances fails to guarantee any protection against unfair practices.

VI. DIRECT SATELLITE BROADCASTING

Another prominent area in the field of international telecommunications is Direct Satellite Broadcasting (hereinafter referred to as "**Direct Broadcasting**"). Direct Broadcasting involves the transmission of signals from satellites placed in the geostationary orbit; therefore the need to track the signals by an antenna does not

arise.[59] The legal principles on Direct Broadcasting can be traced back to the year 1970s, with the adoption of Resolution 2916 (XXVII) of November 9, 1972 which sought to lay down general rules regarding the use of artificial satellites by member nations for the purpose of television broadcasting 'with a view to concluding international agreement or agreements'. However, there were various issues on which the Legal sub-committee of the UN Committee on Peaceful Use of the Outer Space (hereinafter referred to as "**COPUOS**") failed to reach a consensus. This lack of agreement was attributed to the conflict between the stance of states favouring free flow of information and nations concerned with security and integrity. This paved the way for the adoption of the Direct Broadcasting Principles in the year 1982.[60] The principle relating to state responsibility in direct broadcasting activities was a much debated issue. Principle F of the Direct Broadcasting Principles sought to hold a state responsible only in case of activities carried out by the state for its national and intergovernmental activities. However, these principles were also not devoid of ambiguities.

Principle F, unlike Article 6 of the Outer Space Treaty is silent about the responsibility of the state in case of private activities.[61] A possible solution in the absence of any such stipulation would be to apply the principles enshrined in Article VI of the Outer Space Treaty to the Direct Broadcasting Principles. But then, as we have noticed earlier, even Article VI is not free from ambiguities. Another point of contention between the nations was the degree of consultation envisaged by Principle J. Professor Stephen Gorove points out that

[59]A. Chayes and L. Chazen, *Policy Problems in Direct Broadcasting from Satellites*, 5 STAN J. INT. STUD. 4-20 (1970).
[60]Principles Governing the Use by States of Artificial Satellites for International Direct Television Broadcasting, G.A Res. 37/92 (Dec. 10, 1982).
[61]As a matter of fact, a proposal of this kind was presented by Canada and Sweden, only to be rejected by the Soviet Union.

the representation made by the Indian and Greek delegates that the activities be carried out in accordance with international law, if accepted would have solved the problem.[62] Principle I despite attempting to foster international co-operation leaves much to be desired, since the wordings are almost the same as Article XI of the Outer Space Treaty. The phrase "to the greatest extent possible" only invites more confusion.

Furthermore, there exist certain issues specifically in this field that are yet to be addressed. One such problem as Professor Francis Lyall points out is the access to the orbital positions along with radio frequencies and their use thereof.[63] Direct Broadcasting involves the use of electromagnetic spectrum and the allocation of frequencies thereof is usually done on an *a priori* basis. Concerns regarding exhaustion of the orbital resources were raised by several developing nations. Hence, in the ITU-WARC-ORB held in 1985-87, the debate of efficient use versus equitable use was sought to be reconciled and orbital allocations within 10 degrees on the geostationary arc for the purposes of Direct Broadcasting were made.[64] Another issue of utmost importance relates to the content of the broadcasts. Broadcast of certain forms of data may be unacceptable to a country and this may result in significant problems.[65] Therefore, in this regard it may be argued that the Preamble to the Outer Space Treaty, 1967 envisages the use of the outer space exclusively for peaceful purposes; hence the use of a satellite for spreading propaganda and disturbing the internal decorum of a country would violate the spirit

[62]S. GOROVE, DEVELOPMENTS IN SPACE LAW70 (1991).
[63]*Supra* note 27, at 257.
[64]Ram Jakhu, *The Evolution of ITU's Regulatory Regime Governing Space Radio Communication Services and the Geostationary Orbit*, 8 AASL 381 (1983).
[65]J.T. Powell, *Towards a Negotiable Definition of Propaganda for International Agreements relating to Direct Broadcast Satellites*, 45 LAW AND CONTEMP. PROBS. 3 (1982).

of the Outer Space Treaty. Principle 4 of the Direct Broadcasting principles may also be taken into consideration, since it envisages Direct Broadcasting to be carried out in consonance with the principles of international law.

VII. CONCLUDING THOUGHTS: THINGS CAN ONLY GET BETTER?

Considering the analysis presented throughout the course of this paper, it could be observed that there are significant issues involved in the law relating to international telecommunications. As observed in the preceding paragraphs, activities in the telecommunications sector are not conducted particularly by governmental entities but also by intergovernmental consortiums and private entities, which probably was not contemplated by the drafters of the Outer Space Treaty. But then, Article VI though strives to bring non-governmental entities within its ambit, the scope of the provision remains unclear as it is merely a reproduction of the UN Declaration of 1963. The Outer Space Treaty therefore, is not adequately capable of addressing these issues and a comprehensive set of laws are required. The Outer Space Treaty thus remains an epitome of good intention but bad drafting. Similarly, Article 44.2 of the ITU Constitution encourages the efficient and economic use of radio and orbit resources. As a result, in the event of a private body accessing space, these rights and/or obligations which have been conferred on the states have to be licensed to that private organization. In the absence of any legislation governing such licensing activity on the part of the state, the outcome of the space activity in the event of a failure might be a rather risky one. Hence, there is a need for an efficient legal document if not now, at least in the near future.

Looking at the constitution and functioning of the ITU, one cannot but deny the omnipotent role of the body. The 'first come first served' principle of allocating frequencies although, fosters the idea of Article 44.2, a prolonged use of a specific frequency would be akin to claiming title over that particular frequency. The efforts of the ITU must however be commended in this regard as Resolution 4 of the WARC 1979 proscribed considering the allotment of a frequency as permanent, albeit allowing for extension of such period.[66] Coupled with this, the author would also advance suggestions in favour of conferring on the ITU powers to limit the duration or cancel such allotment in case a better use of that particular frequency is proposed in future, keeping in mind the interests of international telecommunications. There is an intrinsic relationship between the orbital positions and frequencies. It has been pointed out that an 'allocation' of positions would go against the spirit of free use contemplated by the various space treaties. To this effect, Stephen Gorove points out that the ban on national appropriation contemplated by Article 2 of the Outer Space Treaty would be effective only if there is "continued physical occupation of the same physical area of the GSO", which he says is practically not possible. However, it is respectfully submitted that Gorove in this regard ignores the point that with the advent of nuclear powered sources, satellites can stay in space for a greater length of time. Nuclear sources like Plutonium and Uranium have a high half-life and as such, a few kilograms of such a source would be enough to keep the satellite in orbit for many years to come. Therefore, I would submit that such an allocation is contrary to the principles of outer space law. However, for the sake of practical handling of all these activities, the international body must have the authority to de-register any orbital allocation if they remain unused or

[66]Period of Validity of Frequency Assignments to Space Stations using the Geostationary-satellite and other Satellite Orbits' RR RES. 4 (Rev. WRC-03).

are not put to efficient use, because the opposite would be a gross violation of Article 44 of the ITU Constitution.

Space activities are governed by a broad framework of laws adopted at the international level. International trade law and the WTO are involved in the supervising matters relating to market access and encouraging liberalization in the telecommunications sector. The Agreement on Basic Telecommunication Services has been a major effort in liberalizing trade services. The members to this agreement contribute to over 90 per cent of the international revenue in telecommunications.[67] International space laws administered by the five major treaties strive to govern issues involving responsibility, liability and use of space resources. However, the loopholes present in the treaty do not address the issues arising out of international telecommunication activities sufficiently. As far as the issues concerning private organisations are concerned, the ITU Constitution is an improvement over the Outer Space Treaty, as Article 6.1 of the ITU Constitution provides that the states must ensure compliance by the licensed parties of the ITU laws and regulations. Furthermore, with the involvement of bodies like the INTELSAT and the INTERSPUTNIK, it is evident that there has to be international cooperation in this regard. In fact, the ITU Constitution itself envisages international cooperation for the rational use of telecommunications and mutual benefits of all the members.[68] International cooperation here must not only include effective participation of all the countries but also looking at the need of the developing as well as underdeveloped countries and working towards a system of inclusive growth keeping in mind the basic tenets of 'common heritage of mankind' such as sustainable exploitation of

[67]Spector P.L., *The World Trade Organization Agreement on Telecommunications*, 32(2) The International Lawyer 217 (1998).
[68]I.T.U. Constitution, art. 1.

space based natural resources and increasing the access of knowledge and technology to developing states. Therefore, in the light of the above discussion, it is imperative that large scale reforms in international laws of outer space, trade and telecommunications are required to keep up with the pace of globalization and technological advancement.