

Emerging Legal Issues of Satellite Telecommunications and Broadcasting*

By Ram Jakhu**

INTRODUCTION

In this paper I will highlight the challenging issues that are emerging in the field of satellite telecommunications and broadcasting with a view that they could possibly be addressed by the United Nations, and particularly the Legal Subcommittee of the General Assembly's Committee on Peaceful Uses of Outer Space (COPUOS).

In the field of telecommunications, the most important new issues that I will address are related to universal service, frequency management, and the possibility of threats to the operation of telecommunications satellites. In satellite broadcasting, the most important issues relate to the freedom or limitation of broadcasting as well as the regulation of the contents of international direct broadcasting by satellite. I will conclude my paper with some specific recommendations for possible tasks that should be undertaken by the UN and especially the Legal Subcommittee of the COPOUS.

In order to better understand the regulatory challenges, it is imperative to glance at the state of the satellite telecom industry and its prospective developments. It may be noted at the outset that technical developments are rapidly doing away with the distinction between telecommunications and broadcasting. However, this distinction

is maintained for the purpose of the present discussions.

STATE OF THE SATELLITE TELECOM INDUSTRY

Telecommunications by satellite have been the most developed and highly commercialized space application. It is not only an extensive commercial industry in itself but has also been the main driving force for other space commercial activities, particularly launch services and space insurance. It is generally believed that the future of satellite telecoms is bright primarily because of the privatization, deregulation and globalization trends prevalent in all economic activities, including telecommunications. A number of authoritative estimates predict a huge market growth in the field of satellite telecoms, though they vary in some details. According to a report by the International Space Business Council and Space Publications, worldwide revenues in 1998 from space activities reached \$97.6 billion.¹ This estimate includes

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** LL.M., D.C.L, Associate Professor, Institute of Air and Space Law, Faculty of Law, and the

revenue generated by services, manufacturing, and support of space activities. One-third of the total revenue was contributed by the continued expansion of the satellite telecommunications services that accounted for \$33.6 billion. The future worldwide space revenue is estimated to grow to \$577 billion from 1998 to 2002, with telecommunications services accounting for \$218 billion of that total. A 1999 report by the Futron Corporation and the Satellite Industry Association estimated that the worldwide market for satellite products and services is \$66 billion, with a 15 percent annual growth rate.² According to this report, "Satellite services is currently the largest and fastest growing segment of the industry, worth \$26.2 billion. Satellite services delivered directly to the end-user (such as DTH television) have been the prime source of revenue growth."

Irrespective of the present uncertainty over the economic viability of mobile satellite telecom systems in the low-Earth orbit, "on-demand" broadband data services are considered to be a lucrative market over the next two decades. The Forecast International/DMS report entitled "Commercial Communications Satellites - 2000-

Director of the Center for the Study of Regulated Industries, McGill University, Montreal, Canada.

¹. Cited in *ISIR Newslines Digest* 2.20, May 18, 1999.

². "Your Guide To Satellite Riches", at <http://www.spacedaily.com/spacecast/news/satellite-99b.html> (November 9, 1999).

2019," predicts that "the worldwide satellite industry will produce nearly 775 geosynchronous-orbiting commercial communications spacecraft during the coming two decades. The value of this production, spread among more than a dozen manufacturers, is about \$80 billion. Over the next 20 years, manufacturers will produce an additional 1,800 satellites slated for deployment in lower Earth orbits; these spacecraft will be worth about \$30.5 billion. 'Commercial communications satellite production is expected to remain relatively robust in the coming years, especially for those units earmarked to provide high-capacity broadband-on-demand data services,'" ³.

A number of developing countries like Argentina, Brazil, China, India, Indonesia, Mexico and Thailand among others, have already launched their national telecommunication satellites for domestic services. There is also a new trend towards geostationary satellites for mobile national and/or

³. Ray Peterson, "High Volume LEO Projects Will Drive Market Health" at <http://www.spacedaily.com/spacecast/news/satellite-biz-00a.html> (15/2/00). Also see "Firm GEO Market Boosts Industry Slightly In 1999" at <http://www.spacedaily.com/spacecast/news/euroconsult-00a.html> (date accessed: 28/1/00). In January 2000, NetSat28 Company LLC, selected Space Systems/Loral . "as the prime contractor to design and build a Ka-band communications satellite for the NetSat28 system. The satellite, scheduled to be fully operational by October 2002, will provide high-capacity broadband-on-demand data services to small businesses and residential users in the United States": see "Loral Wins Internet GEO Bird For NetSat28", at <http://www.spacedaily.com/spacecast/news/internet-00a.html> (date accessed: 28/1/00).

regional telecom services. For example, in February this year, an Indonesian company launched its ACeS (Asia Cellular System) Garuda 1 satellite, which is the world's first regional satellite-based mobile telecommunication geostationary orbit system.⁴ India's first private telecom satellite "Agrani" is similar to ACeS and will be launched soon ushering a new era in satellite telecommunications in India. One can expect that in the near future satellites could actually decrease the tele-density gap between the developed and developing countries by bringing affordable telecommunication services to under-served regions of the world, Africa, for example.⁵

⁴. The ACeS "will provide voice, facsimile, data and Internet services through hand-held mobile and fixed terminals throughout Asia. Starting commercial service in the third quarter of 2000, ACeS will offer complete telecommunications coverage at cost-effective rates to end-users. ACeS Garuda 1 is one of the most powerful telecommunications satellites ever launched, boasting 14 kilowatts at the beginning of its life and 9 kilowatts at the end. As a result, the commercial geostationary satellite can be communicated with from the ground using a typical mobile phone handset": see "Proton Aces Indonesian Satellite Launch" at <http://www.spacedaily.com/spacecast/news/indonesia-00c.html>

⁵. In December 1999, the Volunteers in Technical Assistance (VITA) has signed an innovative agreement to bring low cost email services to rural and isolated areas of developing countries in Africa. See "Satellites Bring Internet To The Village" <http://www.spacedaily.com/spacecast/news/internet-99a.html> (date accessed: 14/12/99). In November 1999, "Titan Corp has entered into an agreement with Telecel International Limited, to create a joint venture that will provide satellite based telecommunications services in Africa utilizing Titan's patented Xpress Connection VSAT

TELECOMMUNICATIONS

Principle of Universal Service

As noted earlier, the rapid increase in the satellite telecom systems has been, and would continue to be, achieved because of the economic policies of privatization and deregulation. Because these systems are and will be primarily privately owned, some countries may not have the opportunity to participate in these systems and/or have access to their services, in the same way that they did in traditional international satellite systems, like INTELSAT and INMARSAT. The primary, if not the only, goal of private enterprises is always to maximize their profits. They could, therefore, be expected to concentrate only on high profit-generating countries or routes and to ignore unprofitable areas or thin traffic routes. This development will run contrary to the principle of universal service.

The principle of universal service, as adopted by the UN General Assembly under its Resolution 1721 as early as

technology. The agreement calls for the new joint venture to provide rural telephony service in each market where Telecel owns a cellular license. ... "Our joint venture with Titan is an exciting opportunity for Africans. Many communities will now be able to go on-line for the first time," said Miko Rwayitare, President and CEO of Telecel. The technology features the latest in prepaid payphone services and internet access as well as wireless local loop integration so that local entrepreneurs can have a long-term viable business": "Titan Calls Telecel Via African VSAT Deal" at <http://www.spacedaily.com/spacecast/news/vsat-99j.html> (date accessed: 30/11/99).

1961, requires that satellite telecommunication services should be made available on a global and non-discriminatory basis.⁶ This has been the most fundamental and important legal principle applicable to the provision of satellite telecom services. Its first implementation and elaboration was effected through the 1963 INTELSAT Interim Agreements, which were later expanded in 1971. After reiterating the UNGA Resolution 1721 in its preamble, the INTELSAT Agreement specified that “satellite telecommunications should be organized in such a way as to permit all peoples to have access to the global satellite system”. Moreover, INTELSAT’s prime objective has been to provide “international public telecommunications services of high quality and reliability to be available on a non-discriminatory basis to all areas of the world”.⁷ In order to practically and fully implement its universal service obligation, INTELSAT was obliged to charge the same rates of space segment utilization for each type of utilization from all applicants irrespective of the fact whether they are members or non-members.⁸ Similar provisions had been

made in the INMARSAT Convention with respect to a global and non-discriminatory access to its space segment,⁹ and non-discriminatory nature of charges for its services.¹⁰ INTELSAT as well as INMARSAT have been international service providers having their own legal personalities¹¹, and thus were subject only to international law. They fulfilled their universal service obligations pursuant to their constituent treaties and because they remained aloof from national political and legal pressures. On the other hand, the new national private entities that will provide global satellite telecom services would be subject to national political and legal pressures of the States of their nationality. For example, if State “A” imposes sanctions against State “B”, the entities having the nationality of State “A” would be legally obliged to follow such measures and thus would have to suspend or terminate, as the case may be, their business operations in State

⁶ The UNGA Resolution 1721 (XVI) D states that “communication by means of satellites should be available to the nations of the world as soon as practicable on a global and non-discriminatory basis”.

⁷ INTELSAT Agreement, Article III.

⁸ INTELSAT Agreement V(d): “All users of the INTELSAT space segment shall pay utilization charges determined in accordance with the provisions of this Agreement and the Operating Agreement. The rates of space segment utilization charge for each type of utilization shall be the same for all applicants

for space segment capacity for that type of utilization”.

⁹ INMARSAT Convention, Article 7 (1).

¹⁰ INMARSAT Convention, Article 19.

¹¹ INTELSAT Article IV: “(a) INTELSAT shall possess juridical personality. It shall enjoy the full capacity necessary for the exercise of its functions and the achievement of its purposes, including the capacity to: (i) conclude agreements with States or international organizations; (ii) contract; (iii) acquire and dispose of property; and (iv) be a party to legal proceedings. (b) Each Party shall take such action as is necessary within its jurisdiction for the purpose of making effective in terms of its own law the provisions of this Article”. Also, see INMARSAT Convention, Article 25.

“B”. In certain cases, some countries might not be provided satellite services in the first place, not only because of economic reasons but also because these countries are considered unfriendly to the satellite service provider’s State of nationality. Moreover, there exists no international treaty obligation, as has been in the case of INTELSAT and INMARSAT, on satellite telecom service providers to furnish service on a global and non-discriminatory basis. Thus, there is a possibility that the principle of universal service would be compromised in the future.

The principle of universal service that I am discussing here should not be confused with the “universal service obligation” (USO) that could be imposed on a telecom service provider under the so-called “Reference Paper”. This “Paper” adopted as a part of the WTO Agreement on Basic Telecommunications Services that has entered into force on 5 February 1998. This Agreement, including the Reference Paper, contains pro-competitive regulatory principles whereby the host country is free and entitled to impose universal service obligation on the service providers domestically while introducing competition. The principle of universal service that I am discussing here relates to an obligation to provide satellite telecom service between the countries and not within a particular country. Secondly, the WTO USO is a right of a country to impose obligation on domestic service providers while the principle of universal satellite telecom service (i.e. UNGA Res. 1721) refers to

the duty of a satellite telecom service provider to furnish services on a global and non-discriminatory basis to all countries.

It is encouraging to note that the first International Telecommunication Union (ITU) World Telecommunication Policy Forum has adopted, in October 1996, some voluntary principles in the form of opinions. These principles were developed in order to help national policy makers, regulatory authorities, the GMPCS¹² operators and service providers to manage the introduction of new systems. One of these principles relates to *Global Service Availability and Universal Access*. This Principle warns against discrimination among different countries or categories of users of the GMPCS services and outlines measures to promote access to GMPCS services in remote or rural areas. However, this Principle is non-prescriptive and non-binding and relates exclusively to the GMPCS services, which are a small segment of satellite telecom services that are being provided and will be provided in the future.

Frequency Management

As noted earlier, more and more satellites are being, and will be, placed in space. This means that there will be an increased pressure on the already scarce and extremely congested frequency spectrum without which no satellite telecom system can be operated. The problem of limited and difficult access to appropriate radio

¹². Global Mobile Personal Communication Satellite

frequencies for satellite telecom service is not new and has been becoming more serious. Countries like India and Indonesia faced difficulties in having access to appropriate radio frequencies even for their first satellite systems in 1970's. The latest cases of such problems are satellite systems like SKYBRIDGE.¹³ The frequency spectrum has been internationally managed by the ITU, the oldest specialized agency of the UN. The ITU has been successful in this field, to a large extent, because telecommunications had remained limited in scope and were considered mainly a technical and public service activity rather than an extensive economic activity in a large number of countries. The ITU still considers the frequency spectrum as a limited technical issue. Moreover, the rule making process in the ITU, though based on the premises of sovereign right of each State, is such that generally powerful States tend to dominate this process. The ITU lacks compliance and enforcement methods whereby the so-called "victims" do not have any recourse to a fair justice in the use of an international and scarce resource like the radio frequency spectrum. The issue of radio frequency management is complex and is difficult

¹³. Skybridge, supported by a French company, Alcatel, has planned to operate 64 LEO satellites in the heavily used Ku-band for its GMPCPS services. It has been facing serious difficulties both at the ITU and the US FCC levels in securing access to an appropriate portion of this frequency band See, Spector, P.L., "Spectrum Sharing and Non-geostationary Systems: WRC-97 Makes Satellite History", Via Satellite, February 1998, p. 98 at p. 100. Also, see "Skybridge Gains Support in Rulemaking to Spur Spectrum Sharing", Satellite News, 22:13, 29 March 1999.

to deal in this brief paper. However, it is sufficient to say that there is a serious need to address the issue of international frequency management from the perspective of international policy in order to effectively ensure the rights of all States to have equitable access to this resource. It may also be noted that the WTO, on the other hand, treats telecommunications purely from the economic perspective and leaves the management of frequency spectrum entirely to the ITU. In my view, it is important to manage this resource under an international regime, which should be developed keeping in mind its economic, cultural, social and international value and importance in mind. More importantly, there is an urgent need to establish an independent international telecom regulatory body, something like the US Federal Communications Commission (FCC), not only to manage the frequency spectrum but also to effectively adjudicate competing demands for this resource by all countries.

Increased Possibility of Threats to Telecommunications Satellites

As is the case of civilian remote sensing satellites, the reliance and use of civilian telecommunications satellites by military establishments is increasing primarily because private systems can provide services more efficiently and economically.¹⁴ This trend will not only

¹⁴. On 3 February 2000, the "U.S. Government's General Services Administration's Federal Technology Service (GSA-FTS) ... awarded a second contract to Hughes Global Services Inc. (HGS) to provide a wide variety of satellite services that can be

expand market share by civilian systems but also increase their vulnerability during military crises. Since in every crisis or war the means of communications of an enemy are generally the first targets for destruction, it can be expected that more efforts would be made by countries to develop and deploy anti-satellite (ASAT's) weapons in the

used by the Department of Defense (DOD) and all federal agencies. To date, more than 40 federal agencies, including the Internal Revenue Service, the Social Security Administration, the Centers for Disease Control, the Department of Veterans Affairs, the International Broadcasting Bureau, the Agency for International Development, as well as the Armed Forces and the Department of Defense, have ordered services under the program": see "GSA Buys Hughes Satellite Services In Bulk" <http://www.spacedaily.com/spacecast/news/satcom-00a.html>. According to the U.S. Acting Deputy Under-Secretary of Defense for Space, "it is abundantly clear that DoD plans to leverage the commercial market more and more to support the operational needs of the warfighter" : G. Klinger [acting deputy under-secretary of defense for space, U.S.] and T. R. Simpson, "Military Space Activities: The Next Decade", Aerospace America, January 1998, p.44, at 47. According to the commander in chief of the U.S. and the commander of the U.S. Air Force Space Command, - Gen. Joseph W. Ashy - "It is politically sensitive, but it's going to happen. Some people don't want to hear this, and it sure isn't in vogue ... but ... absolutely we're going to fight *in* space. We're going to fight *from* space and we're going to fight *into* space when [orbital assets] become so precious that it's in our national interest [to do so]. That is why the U.S. has development programs in directed energy and hit-to-kill mechanisms. We are developing direct-force applications" : Cited in William B. Scott, "USSC Prepares for Future Combat Missions in Space", Aviation Week and Space Technology, August 5, 1996, p.51; also cited in Karl Grossman, "Master of Space", Space News, 31 January 2000, p. 15.

future in order to damage telecommunications satellites. Consequently, there would be an increase in the possibilities of the so-called "space wars".

There has recently been an increase in Internet offences, which are essentially international in nature.¹⁵ Also, it is not far fetched to expect that as telecom satellite systems are being heavily relied upon both for civilian and military purposes, they would be easy targets for terrorist attacks particularly since it is not difficult for individuals with some computer expertise to penetrate into highly sensitive security databases. This problem is not exclusively related to satellite telecommunications. However, as more and more satellite systems are and will be used for high speed Internet services, e.g. Teledisc system, the problem of

¹⁵. "Love Bug" a computer virus, which is believed to be the work of a 15-year old in the Philippines, has caused havoc around the world. The virus, the worst in the history of computer technology, has caused damage exceeding US\$ 1 billion to over 2 million computers in Asia, Europe and North America and its victims include private companies, governments and security agencies, like the US Pentagon and the Central Intelligence Agency. See, McArthur, K. and McKenna, B., "Love Bug hits world's e-mail", The Globe and Mail, 5 May 2000, p. A-1. Also see, Christopher Bowe, "World-wide Sweep for Internet Fraudsters", in Financial Times, March 24, 2000, p. 1: "A world-wide sweep to target fraudulent, get-rich-quick schemes on the internet has been orchestrated by the US Federal Trade Commission with the help of international agencies.... The sweep across 28 countries - believed to be the largest of its kind - highlighted more than 1,600 suspect web sites, which will be warned to stop or change their claims."

“cyber-terrorism” will adversely affect the operation of such systems. Therefore, the problem of increased possibilities of threats to the operation of telecommunications satellites warrants an international solution.

BROADCASTING

Flow of information has always been highly political, both nationally and internationally. From the dawn of space age, direct broadcasting by satellite (DBS) has been controversial. Some States, with a tradition of freedom of information, have been arguing that since the principle of freedom of broadcasting has been well recognized internationally there should not be any requirement of "prior consent" for international DBS. On the other hand, the "have-nots" States and others feared that this technology would possibly erode their cultures and economies. They argued against the principle of freedom of broadcasting by satellite and favored the requirement of agreements between the transmitting and receiving States prior to the start of a DBS service. This approach has been dubbed as "prior consent" argument.

It has been asserted that the principle of freedom of broadcasting is based on the 1948 Universal Declaration of Human Rights and other human rights conventions as well as international customary law. Article 19 of the Declaration, specifies that “everyone has the right to freedom of opinion and expression: this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any

means and regardless of frontiers”. The essential elements of this Article have been adopted in Article 19 of the 1966 International Covenant on Civil and Political Rights and Article 10 of the 1954 European Convention on Human Rights. Therefore, this Article is considered to have provided a legal basis for the principle of freedom of broadcasting. However, it is important to keep in mind that such freedom has never been considered absolute since it can be subjected to laws for “securing due recognition and respect for the rights and freedoms of others” and for “meeting the just requirements of morality, public order and the general welfare in a democratic society”.¹⁶

Freedom of broadcasting by satellite has been asserted to be a continuation of the freedom of radio broadcasting, which had become accepted as customary international law since the 1920's and 30's. However, it is important to keep in mind that such acceptance was accorded essentially due to the reciprocity resulting from the broadcasting capabilities of various States. Moreover, such a freedom has been subjected to:

¹⁶. Article 29 of the Universal Declaration of Human Rights provides that (1) Everyone has duties to the community in which alone the free and full development of his personality is possible. (2) In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society.

(1) the 1936 Convention on Broadcasting which prohibits broadcasting acts that could be incompatible with the internal order or the security of a territory of State and those which constitute, or are likely to lead to, an incitement to war against another State;¹⁷

(2) the 1966 European Agreement on Pirate Radio Stations which prohibits and controls broadcasting by pirate stations;¹⁸ and

¹⁷. The 1936 International Convention Concerning the Use of Broadcasting in the Cause of Peace, signed at Geneva, in its Article 1 provides that: "The High Contracting Parties mutually undertake to prohibit and, if occasion arises, to stop without delay the broadcasting within their respective territories of any transmission which to the detriment of good international understanding is of such a character as to incite the population of any territory to acts incompatible with the internal order or the security of a territory of a High Contracting Party". Similarly Article 2 prohibits broadcasting which constitutes, or is likely to lead to, an incitement to war against another Contracting State.

¹⁸. The 1966 European Agreement for the Prevention of Broadcast Transmitted from Stations Outside National Territories, which was signed by the member States of the Council of Europe, in its Article 2 specifies that: "Each Contracting Party undertakes to take appropriate steps to make punishable as offences, in accordance with its domestic laws, the establishment or operation of broadcasting stations referred to in Article 1, as well as acts of collaboration knowingly performed". Article 1 of the Agreement defines 'pirate' stations as those that "are installed or maintained on board ships, aircraft or any other floating or airborne objects and which, outside national territories, transmit broadcasts intended for reception or capable of being received, wholly or in part, within the territory of any Contracting Party". "Appropriate steps" referred to in Article 2 may include jamming of signals of 'pirate' stations if

(3) the radio frequency international sharing and co-ordination requirements under the ITU agreements.

Freedom of television broadcasting was accepted as a continuation of freedom of radio broadcasting and subject to similar limitations. However, since television signals do not go beyond 30 or 40 kms without relay stations, it never became a serious controversy, except in certain cases of short distance transborder TV broadcasting, e.g. US-Canada.

Since satellites have been expanding geographical coverage of television broadcasts extensively, the controversy over international television broadcasting by satellite has been becoming serious and real. The States that advocated against the principle of freedom of broadcasting by satellite were of the opinion that the legal principle of State sovereignty entitles a State an exclusive right to control the flow of information on its territory.

The ITU Radio Regulations have the effect that no international DBS service could be started without the prior consent of the receiving State. For example, ITU Radio Regulation no. S23.13 § 4 (adopted in 1971 as 428A), specifies that: "In devising the characteristics of a space station in the broadcasting-satellite service, all technical means available shall be used to reduce, to the maximum, the radiation over the territory of other countries unless an agreement has been

that is permitted under the domestic law of a Contracting State.

previously reached with such countries.” Similarly, the 1977 and 1983 ITU Frequency Allotment Plans allow the use of 12 GHz band of radio frequencies for DBS for national coverage only. Such frequencies could be used for international services only on the basis of prior agreement between the transmitting and receiving States and only after following procedures for the modification of the relevant Allotment Plans.

The 1972 UNESCO Declaration of Guiding Principles on Satellite Broadcasting stresses the need to “reach or promote prior agreements concerning DBS to the population of countries other than the country of origin of the transmission”.¹⁹ Similarly, the 1982 UN General Assembly Resolution (A/RES/ 37/92) on Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting, can be considered to support the requirement of prior consent. However, one must keep in mind that this Resolution was a result of over two decades of discussions in the COPUOS - which could not resolve

¹⁹. Declaration of Guiding Principles on the Use of Satellite Broadcasting for the Free Flow of Information, the Spread of Education and Greater Cultural Exchange, Article IX: “In order to further the objectives set out in the preceding Articles, it is necessary that States, taking into account the principle of freedom of information, reach or promote prior agreements concerning DBS to the population of countries other than the country of origin of the transmission....., with respect to commercial advertising, its transmissions shall be subject to special agreement between the originating and the receiving States”.

the issue on a consensus basis and the final decision had to be made by the UNGA by a majority vote. Most of the Western countries either voted against or abstained from voting. All the provisions of this Resolution (except those mentioned paragraphs 13, 14, and 15) contain what the States “should” do as opposed to what they “shall” do.²⁰ The resolutions of the UNGA, except those for internal purposes, are considered non-binding instruments; though when adopted unanimously they could become a basis for the development of customary international law. Both the UNESCO and UNGA Resolutions, though non-binding in nature, tend to support the requirement of prior consent. In addition, it is important to keep in mind that a number of States have been making declarations, in and outside the COPUOS, regarding the limitations on freedom of satellite broadcasting and the right of States to control foreign satellite broadcasts. Thus, from the

²⁰. Paragraphs 13, 14 and 15 of the Resolution provide that : “(13) A State which intends to establish or authorize the establishment of an international direct television broadcasting satellite service shall without delay notify the proposed receiving State or States of such intention and shall promptly enter into consultation with any of those States which so requests. (14) An international direct television broadcasting satellite service shall only be established after the conditions set forth in paragraph 13 above have been met and on the basis of agreements and/or arrangements in conformity with the relevant instruments of the International Telecommunication Union and in accordance with these principles. (15) With respect to the unavoidable overspill of the radiation of the satellite signal, the relevant instruments of the International Telecommunication Union shall be exclusively applicable”.

early days of the space age, there has not been any clear acquiescence or tacit agreement on the freedom of international satellite broadcasting. Therefore, it can be said that a receiving State is *legally* entitled, if it chooses, to object to any unwanted DBS transmission from other States.

In spite of a legal right to object to foreign DBS programs, a large number of States at present, including some of the developed countries like Canada and France, still remain concerned about the erosion of their cultures and are adopting national regulations limiting foreign contents of broadcasts over their territories. As DBS is rapidly becoming a reality and common practice, the concern over unwanted foreign programs broadcasted by satellite can be expected to grow as compared to the past when DBS was considered mostly a technical possibility. In Canada, foreign direct broadcast satellites are dubbed as "death stars" that have the potential to kill the national broadcasting system. Recently, it was reported that in Malaysia concern over foreign program is becoming serious.²¹ Astro satellite service in Malaysia offers four channels, which carry Chinese-language programming from Taiwan and Hong Kong. According to the chairman of the Democratic Action Party, these programs, "could lead to fresh racial polarization in Malaysia, whose population is made up of a majority of Malays, as well as Chinese

and Indians". It has also been asserted that "such foreign programs would have a detrimental effect on patriotism". The government of Malaysia has undertaken to study the effect of these channels. This case indicates that as international DBS becomes more common, the issue of foreign contents of such broadcasts would become more serious. This issue needs to be resolved at an international level in order to prevent serious controversies and to encourage the development of DBS technology that certainly has the potential to bring the peoples of the world closer.

CONCLUSIONS AND RECOMMENDATIONS

Both satellite telecommunications and broadcasting have proved to be the most extensively commercialized space applications. No doubt, these applications will continue expanding in the future, especially as about two-thirds of the world's population is still without proper access to basic telecommunication services. Also the irreversible trends of privatization, deregulation and globalization would push for such expansion. However, it can be expected that in future the principle of universal satellite telecommunication service would be compromised. Some countries, mainly the poor and developing ones, might be denied benefits of telecom satellite technology because they mostly offer limited and unprofitable markets to the private satellite telecommunications service providers. There could also be an increased possibility of threats against telecommunications and broadcasting satellites from "star-war"

²¹. See "Malaysia Urged To End 'Divisive' Row Over Foreign Satellite Channels" (March 7, 2000) at <http://www.spacedaily.com/spacecast/news/malaysia-00a.html>

or “cyber-terrorism” type acts. A large number of States could be expected to be seriously concerned about the erosion of their cultures by the unwanted foreign contents of DBS over their territories.

Therefore, there is a need and a challenge to internationally address these issues and find appropriate solutions. It is recommended that the UN, particularly the Legal Subcommittee of the COPUOS, should take initiative in this respect by starting negotiating and drafting a new declaration, of legal principles, which would:

- (a) reiterate the UNGA Resolution No. 1721 and thus re-enforce the principle of universal service to be provided by telecom satellite systems irrespective of the fact whether they are operated by intergovernmental organizations or private international service providers;
- (b) stipulate that the States should undertake to start considering, and eventually adopting an international treaty, in cooperation with the WTO, ITU and other international organizations, for the purpose of (i) creating an international regulatory body to effectively manage and ensure equitable access by all countries to the radio frequency spectrum and (ii) empowering this body to efficiently adjudicate related disputes [international regulatory regime could still continue to be established by the

ITU and WTO within their mandates];

- (c) recommend undertakings by States that they would not, during the times of crisis or war, damage telecom satellites, particularly those civilian systems that have been notified to and registered with the ITU;
- (d) specify the measures the States must take to effectively prohibit and control “cyber-terrorist” activities, particularly those that are committed via telecommunications satellites; and
- (e) recommend that States negotiate an international treaty prohibiting the use of DBS for offensive purposes. [In this regard, the 1936 Broadcasting Convention and the European Agreement of International Television Broadcasting could be used as guide for the drafting of the recommended treaty].

I believe that such a declaration, which could eventually be transformed into an international treaty, is necessary for the continuous expansion of satellite telecommunications and broadcasting. The proposed treaty would avoid serious controversies and foster satellite technology to continue bringing real economic and cultural benefits to the whole of mankind.