

THE INTERNATIONAL DIRECT BROADCAST SATELLITE CONTROVERSY

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I. INTRODUCTION

OVER THIRY-ONE years ago, the Soviet Union's launch of the first communications satellite, Sputnik, sent shock waves throughout the global community.¹ Not only did this Soviet planetary experiment initiate the superpowers' race in space, but it also suggested that satellites would some day carry broadcast signals directly to home receivers in foreign countries.² The United States response was a \$30 billion investment in its fledgling space program, resulting in its first successful satellite launch just fourteen months later.³ The commercial era for satellite telecommunications was initiated when the United States Congress passed the Communications Satellite Act of 1962,⁴ which created a private corporation, the Communications Satellite Corporation (COMSAT), as the United States "carriers' carrier" for satellite telecommunications.⁵ COMSAT was given the task of operating

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¹ R. WHITE & H. WHITE, *THE LAW AND REGULATION OF INTERNATIONAL SPACE COMMUNICATION* 235 (1988); *see also* A. BELENDIUK & S. ROBB, *BROADCASTING VIA SATELLITE: LEGAL AND BUSINESS CONSIDERATIONS* 1 (1979) (providing a general overview of satellite broadcasting techniques and the resulting issues).

² K. QUEENEY, *DIRECT BROADCAST SATELLITES AND THE UNITED NATIONS* 13 (1978).

³ A. BELENDIUK & S. ROBB, *supra* note 1, at 2.

⁴ Communications Satellite Act of 1962, Pub. L. No. 87-624, 76 Stat. 419 (codified as amended at 47 U.S.C. §§ 701-757 (1982 & Supp. V 1987)).

⁵ *Id.* at § 731; A. BELENDIUK & S. ROBB, *supra* note 1, at 4.

the United States portion of the International Telecommunications Satellite Organization (INTELSAT), one of only two global satellite systems.⁶

INTELSAT launched its first satellite, Early Bird, in 1965 and has maintained a monopoly on international satellite communications routes into the mid-1980s by non-discriminatory price averaging and economies of scale.⁷ INTELSAT is currently owned jointly by 114 governments.⁸ One of its first telecasts was a Soviet track meet transmitted "live" to the United States with a total satellite capacity of 240 telephone circuits and one television channel, which represents a primitive contrast to the present generation of INTELSAT VI satellites that provide 12,000 telephone circuits and two color video circuits simultaneously.⁹ The INTERSPUTNIK Satellite System that was created by the Soviet Union in 1968 provides global coverage with its Stationar-T and 1-10 series of C-Band satellites, which are designed for community direct broadcast satellite (DBS) reception, rather than point-to-point reception, as provided by most INTELSAT payloads.¹⁰

The communications, research, and military defense needs of many countries have added to the proliferation of orbiting satellites of all types.¹¹ In addition to the international INTELSAT and INTERSPUTNIK consorti-

⁶ W. HOWELL, *WORLD BROADCASTING IN THE AGE OF THE SATELLITE* 252 (1986).

⁷ *Id.* at 253. The first regional satellite venture to challenge INTELSAT came in 1980 when 21 nations of the Arab League decided to develop the ARABSAT system which was launched in 1984. *Id.*; see Payne, *Earth to INTELSAT: The Party's Over*, *BUSINESS WEEK*, Sept. 5, 1988, at 94 (INTELSAT is also being challenged by its first international satellite competitor, Pan American Satellite Corporation (PanAmSat), which recently launched its first satellite).

⁸ Payne, *supra* note 7, at 94; see A. BELENDIUK & S. ROBB, *supra* note 1, at 5-7; see also Pirrotti, *The Global Satellite Cooperative: Is The U.S. Cooperating?*, 9 *COMM. & LAW* 57 (1987) (discussing whether the United States is living up to its commitment to INTELSAT).

⁹ A. BELENDIUK & S. ROBB, *supra* note 1, at 5.

¹⁰ W. HOWELL, *supra* note 6, at 252.

¹¹ S. AYALA, *Current Status and Expected Developments in the Area of Satellite Communications in the Latin American and Caribbean Region*, NASA TECHNICAL MEMORANDUM (1986).

ums, there are now in the geostationary orbit (GSO)¹² many fixed satellite (regional/multinational broadcast) services such as the ANIK satellites from Canada, the MOLNIYA, GORIZONT and EKTRAN from the Soviet Union, and EUTELSAT and OTS in Europe.¹³ Additional services include Japan's SAKURA, Indonesia's PALAPA, India's INSAT, the Arabic nations' ARABSAT, Brazil's BRASILSAT, Australia's AUSSAT, and Mexico's MORELOS.¹⁴

This technological opportunity to cross national boundaries and reach citizens of other nations is accomplished by increasing the radiation power of distribution satellites.¹⁵ The signals emitted by direct broadcast satellites (DBS) are receivable directly by conventional radio and television sets.¹⁶ If the radiation power is not strong enough for unaugmented radio and television receivers, small antennae and converters are capable of augmenting domestic sets.¹⁷ As DBS technology develops, therefore, elimination of complex antennae and sophisticated earth stations may result. Satellite telecommunications, however, are impossible without the proper radio links that reduce transmission interference.¹⁸ Although satellites are technically used for earth-bound activities, the princi-

¹² The geostationary orbit is an orbit 22,300 miles over the earth's equator. At this distance, the satellite's period of rotation equals the earth's; therefore, a satellite in the GSO appears to be in a stationary position when compared to a designated point on earth. One DBS in the GSO can broadcast to at least one-third of the earth's surface such that only three satellites in this orbit are theoretically necessary for global telecommunications services. N. MATTE, *AEROSPACE LAW: TELECOMMUNICATIONS SATELLITES* 6-7 (1982). Each geostationary satellite covers a surface area of about 1,000,000 square miles. Dausen, *Direct Television Broadcasting by Satellites and Freedom of Information*, 3 J. SPACE L. 59 (1975).

¹³ S. AYALA, *supra* note 11, at 4.

¹⁴ *Id.*

¹⁵ N. MATTE, *supra* note 12, at 8.

¹⁶ *Id.*

¹⁷ *Id.* A few states have already experimented with the use of such satellites and the favorable results indicate that DBS will be available for widespread television broadcasts in the future. *Id.*

¹⁸ *Id.* at 9. "Mutual harmful interference will occur if two or more radio stations (transmitters) [are] simultaneously transmitting radio signals on the same radio frequency in the same area." *Id.* at 2.

ples of aerospace law govern their potential for harmful interference.¹⁹

The information transferred over DBS is regarded as a politically sensitive issue that requires supervision by governmental or intergovernmental agencies.²⁰ The international debates surrounding the control of DBS and its effects have focused upon the political, social, economic, and technological environments into which it is introduced.²¹ Furthermore, with INTELSAT and INTERSPUTNIK global systems in place, the DBS controversy raises critical issues about the appropriate role of governments in broadcast regulation and the individual's rights to freedom of speech and free flow of information.²²

The United Nations (UN) has provided the institutional framework within which the legal and political implications of DBS have evolved.²³ The initiatives were delegated to the Committee on Peaceful Uses of Outer Space (COPUOS), whose function is to promote the coordination, review, and encouragement of terrestrial experiments.²⁴ Two other specialized agencies of the United Nations, the International Telecommunication Union (ITU) and the United Nations Educational Scientific and Cultural Organization (UNESCO), have contributed to-

¹⁹ *Id.* at 9. The placement of satellites in the aerospace medium brings the satellites within the realm of aerospace law. *Id.*

²⁰ *Id.* at 12. The International Telecommunication Union (ITU) was originally founded in 1846 to establish international regulations for telegraphy. *Id.* at 85. ITU conventions, however, have subsequently been expanded to include DBS issues. *Id.* at 93. Several international satellite organizations have also formed along political lines, such as the Western-oriented INTELSAT and the Socialist-oriented INTERSPUTNIK. *Id.* at 13.

²¹ *Id.* at 14. "The increased participation of developing States in telecommunications satellites and in the efforts to establish a technological link between developed States are perhaps two of the most important political and legal problems awaiting an equitable and generally acceptable solution." *Id.*

²² *Id.* at 186.

²³ K. QUEENEY, *supra* note 2, at 12.

²⁴ See *Review of the Activities and Resources of the United Nations and Its Specialized Agencies and of Other Competent International Bodies Relating to the Peaceful Uses of Outer Space, Report of COPUOS*, U.N. Doc. A/AC.105/83 (1967); K. QUEENEY, *supra* note 2, at 12.

ward international agreement in the field of DBS.²⁵ The ITU, which regulates telecommunications on an international level, has accommodated DBS systems by allocating frequency bands on the radio spectrum and by coordinating the systems technically to prevent signal interference and to make optimal use of the spectrum or orbits.²⁶ All regulatory policies as applied by the member governments are agreed to at the ITU's Plenipotentiary and Administrative Conferences.²⁷ Additionally, UNESCO has developed programs to encourage the free flow of information, the spread of education, and greater cultural exchange.²⁸

The purpose of this article is to examine the controversial arguments for and against the regulation of DBS and to examine various strategies of international broadcast regulation, including technical restrictions on satellite operations, parameters on program content, a requirement to obtain the prior consent of the receiving country, and guidelines for spillover. The article will also review the DBS debate in the United Nations as well as the specific regulation initiatives and their outcomes. The article next analyzes the technical and economic assumptions of DBS globalization, the advantages of a global DBS system, and the remaining problems hampering international cooperation. Finally, the article will discuss the emerging technology and conclude with observations on the future of DBS systems.

II. DEBATE OVER INTERNATIONAL REGULATION OF DIRECT BROADCAST SATELLITES

The COPUOS Working Group on Direct Broadcast Satellites directed the initial discussions on DBS regula-

²⁵ K. QUEENEY, *supra* note 2, at 12.

²⁶ Butler, *World Administrative Radio Conference for Planning Broadcasting Satellite Service*, 5 J. SPACE L. 93 (1977); see International Telecommunications Convention, 1973, 23 U.S.T. 1527, T.I.A.S. No. 7345, 610 U.N.T.S. 205.

²⁷ Butler, *supra* note 26, at 93.

²⁸ K. QUEENEY, *supra* note 2, at 12. UNESCO sponsored studies on communication satellites as early as 1962. *Id.* at 118.

tion.²⁹ One early report of the group indicated that DBS development promised improved communications and understanding between various world cultures.³⁰ But, the group acknowledged potential disagreements could arise if the technology were abused. The areas of concern included: (1) propaganda, incitement, and interference programs; (2) programs using violence, obscenity, and subliminal advertising; and (3) programs with the potential to undermine national integrity.³¹ The COPUOS Working Group recognized that DBS technology could usurp national control of telecommunications in receiving states and raise legal questions about national sovereignty, international responsibility and liability, the protection of copyrights, and the rights of interpretative artists and performers.³² The most critical concern of the working group was the relationship between the individual's fundamental right to the free flow of information and the national sovereignty of states over their airspace.³³

In several sessions, the Soviet Union and the less developed countries (LDCs) made the argument that, without international regulation, DBS would be used to export imperialistic Western culture, ideology, and commercialism.³⁴ One premise was that if American programs and commercials on DBS were transmitted to develop new product markets in foreign countries, they could stimulate premature demand for the products and thereby damage the capital investment, education, and health of the re-

²⁹ R. WHITE & H. WHITE, *supra* note 1, at 243. The purpose of the Working Group was to analyze the technical feasibility and the social, cultural, and legal effects of communication by DBS. G.A. Res. 2453, 23 U.N. GAOR Supp. (No. 18) at 9, U.N. Doc. A/7462 (1968).

³⁰ R. WHITE & H. WHITE, *supra* note 1, at 245 (summarizing, *Committee Report by COPUOS, Working Group on Direct Broadcast Satellites*, U.N. Doc. A/AC.105/50 (1969)).

³¹ *Id.* at 246.

³² Dausen, *supra* note 12, at 60.

³³ *Id.*; see Goedhuis, *Preliminary Report and Questionnaire on the Legal Aspects of the Use of Direct Broadcasting Satellites*, 56th CONF. OF THE INT'L LAW ASSOCIATION 6 (1974-75).

³⁴ K. QUEENEY, *supra* note 2, at 59.

ceiving nation.³⁵ The presumption was that big businesses would buy advertising time in lands where their products were not available for sale. This argument, however, raises a question as to why any company would want to buy expensive advertising time in a foreign country where no opportunity exists to capitalize on its promotions.³⁶

Another argument raised the concern that the illiterate population of the receiving nations would be the pawns of "mind controlling" programs by foreign broadcasters.³⁷ To thwart these perceived abuses, the Soviet Union and the LDCs demanded legal norms to regulate DBS.³⁸ This argument for regulation is closely aligned with "statist" assumptions of power and culture. That is, because the state cannot be defined apart from the culture of its people, any alien influence that affects or changes the culture will fundamentally alter the state.³⁹ The state, therefore, must establish barriers to any outside influences. These fears of cultural effects were motivated not only by a desire to control program content but also by a belief that only a small number of countries would be able to afford the DBS technology that loomed on the horizon.⁴⁰

The United States opposes DBS regulation on the basis that a state has the sovereign right to transmit international broadcasts, and restrictions on program content are seen as violations of the first amendment of the United

³⁵ *Id.* at 50.

³⁶ *Id.* at 59.

³⁷ Paul, *Images From Abroad: Making Direct Broadcasting by Satellites Safe for Sovereignty*, 9 HASTINGS INT'L & COMP. L. REV. 329, 330 (1986). "Fear that the DBS will be abused to export Western culture . . . [has] produced demands for international regulation. [This] fear[], though not wholly unfounded, exaggerate[s] the potential of DBS. In fact, DBS will operate under economic constraints which will limit their scope and function for some time." *Id.*

³⁸ N. MATTE, *supra* note 12, at 186.

³⁹ Paul, *supra* note 37, at 341.

⁴⁰ K. QUEENEY, *supra* note 2, at 36. The three factors motivating these fears were the following: "(1) the need for domestic control and approval of program content; (2) the belief that DBS operational systems were imminent; and (3) the realization that only a few states were technically and financially able to implement such a satellite." *Id.*

States Constitution.⁴¹ This advocacy is a variation of the "free flow critique," a principle that labels such barriers to the free flow of communications as intrusions upon fundamental international human rights.⁴² This principle is justified on the basis of Article 19 of the United Nations Universal Declaration of Human Rights, which confirms a right to both send and receive information across national boundaries.⁴³ Although the Universal Declaration is non-binding, its advocates view it as a source of international law.⁴⁴

In support of this viewpoint, proponents argued the following: (1) technical and economic factors made the appearance of DBS unlikely in the near future; (2) any regulations imposed upon the new technology could hinder its development and introduction; and (3) regulations would obstruct information from flowing freely throughout the world.⁴⁵ The flaw in the reasoning of the third factor is that the Soviet bloc nations continue to argue against any unlicensed broadcasting within their borders. The Soviet Union, for example, has impeded the flow of foreign broadcasting by using jamming techniques and threatening the destruction of interfering satellites.⁴⁶ Almost half of the developing countries continue to censor any programming that has been transmitted without prior agreement or discussion regarding content guidelines.⁴⁷

⁴¹ Comment, *The Heavenly Realm of Regulation: What Is The Outlook for DBS Now?*, 52 J. AIR L. & COM. 221, 241 (1986). The United States, in other words, views DBS program content regulations as unconstitutional attempts to limit rights to free speech and press. *Id.*; see also U.S. CONST. amend. I.

⁴² Paul, *supra* note 37, at 345.

⁴³ *Universal Declaration of Human Rights*, 1948 Y.B. ON HUM. RTS. 459, U.N. Doc. A/811. Article 19 states that "[e]veryone 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 media and regardless of frontiers." *Id.*

⁴⁴ K. QUEENEY, *supra* note 2, at 15.

⁴⁵ *Id.* at 37.

⁴⁶ Paul, *supra* note 37, at 347.

⁴⁷ *Id.* Although the degree of censorship varies, virtually all governments censor foreign broadcasting to some extent, which places serious doubt upon the idea that any recognized international right to broadcast across national boundaries exists. *Id.*

In its purest sense, the free flow critique presumes that both the developed nations and LDCs have the sophisticated technological infrastructure to send as well as receive the flow of information.⁴⁸ As a rule, however, the Western media predominantly controls current broadcasting technology and transmits information based upon its own value system.⁴⁹ The developing countries' access to DBS is thereby limited and the spectrum of diversified broadcasting is reduced. In essence, the proponents of DBS regulation advocate respect for national sovereignty through prior consent, and the opponents of regulation emphasize the "free flow of information" as both an American constitutional right and a human right recognized in Article 19 of the Universal Declaration of Human Rights.⁵⁰

DBS discussions in the United Nations are generally within the context of the United Nations involvement in outer space affairs and the development of space law. Both COPUOS and ITU have charted legal norms from the existing framework of international public law, international private law, and national legislation.⁵¹ The public instruments applicable to DBS are relevant General Assembly resolutions, the United Nations Charter, the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space Including the Moon and Other Celestial Bodies (Outer Space Treaty), and specific ITU Conventions and Radio Regulations.⁵²

⁴⁸ *Id.* at 346. "The free flow critique assumes an open marketplace of ideas which bears little resemblance to the real world." *Id.*

⁴⁹ *Id.* Professor Paul notes that LDC critics charge "that the Western press is laden with liberal values historically tied to imperialism and that [W]estern reporting of the LDCs is inaccurate, incomplete, and biased." *Id.*

⁵⁰ *Id.* at 345-47. For a discussion of the *Universal Declaration of Human Rights*, see *supra* note 43 and accompanying text.

⁵¹ K. QUEENEY, *supra* note 2, at 50. International public law, such as bilateral or multilateral agreements, controls transactions between states, and international private law controls the interactions between private parties in such matters as the rights of broadcasters. *Id.*

⁵² *Id.* at 25. For a discussion of relevant UN resolutions, see *infra* notes 119-141 and accompanying text. For a discussion of the Outer Space Treaty, see *infra* notes 133-134 and accompanying text. And, finally, for a discussion of the ITU

III. STRATEGIES OF INTERNATIONAL BROADCAST REGULATION

Having reviewed the arguments for and against DBS regulation, the next question is, assuming DBS should be regulated, whether control should be achieved by technical restrictions on satellite operation, content guidelines, or prior consent requirements.

A. Technical Restrictions

Technical restrictions are used by the ITU to minimize the problem of spillover in adjacent countries and to permit the receiving country to decide what is permissible program content.⁵³ The 1971 World Administrative Radio Conference (1971 WARC) of the ITU adopted Radio Regulations concerning the cessation of emissions by space stations upon the objection of a receiving country.⁵⁴ The purpose of the regulations was to reduce accidental broadcast across national boundaries.⁵⁵ Specifically, Radio Regulation 428A⁵⁶ required the spillover of a broadcast satellite signal into a neighboring state to be reduced to the "maximum extent practicable," unless a prior agreement was established with the receiving state.⁵⁷

Spillover occurs when a country cannot physically radiate to its own territory without broadcasting into a neighboring country. The beam of a DBS is conical in shape with a gradual fall-off from the core point of maximum strength.⁵⁸ In achieving national coverage, the beam often spills into regions of neighboring countries that

Convention and Radio Regulations, see *infra* notes 54-67 and 96-110 and accompanying text.

⁵³ Butler, *supra* note 26, at 93.

⁵⁴ *Id.* at 96. "Space stations shall be fitted with devices to ensure immediate cessation of their radio emissions by telecommand, whenever such cessation is required under the provisions of these regulations." Administrative Regulations (Radio Regulations), 1973, 23 U.S.T. 1527, T.I.A.S. No. 7935.

⁵⁵ Butler, *supra* note 26, at 96.

⁵⁶ Radio Regulations, *supra* note 54, No. 428A.

⁵⁷ Butler, *supra* note 26, at 96; see also K. QUEENEY, *supra* note 2, at 87.

⁵⁸ K. QUEENEY, *supra* note 2, at 83-88. "The amount of spillover depends upon several factors: the location and shape of the country, the diameter of the satellite

stand within its field. If the DBS transmission is on the same frequency band as the neighboring country, the spillover will cause interference with the neighbor's broadcasting services.⁵⁹

Although 1971 WARC was concerned primarily with radio frequency coordination and notification procedures, the states advocating the principles of state sovereignty claimed that "prior consent" had been established by Regulation 428A.⁶⁰ The regulation provides that "[i]n devising the characteristics of a space station in the broadcasting-satellite service, all technical means available shall be used to reduce, to the maximum extent practicable, the radiation over the territory of other countries unless an agreement has been previously reached with such countries."⁶¹

Some nations view Regulation 428A as tantamount to applying prior consent requirements to satellite broadcasting into home receivers.⁶² For example, in 1979 Sweden and Canada advocated that any direct television broadcasting by satellite that was directed at a foreign entity could only be established in a manner consistent with relevant ITU provisions.⁶³ This proposition seemed to indicate that DBS service could not proceed without compliance with Regulation 428A.⁶⁴

Although the United States participated in the 1971 conference adopting Regulation 428A, as well as the 1977 conference applying it, the United States maintains that the regulation is strictly a technical guideline that does not carry the force of international law.⁶⁵ This position was confirmed in a conversation with Federal Communi-

beam, the degree of the beam's falloff and the maintenance of the satellite's position." *Id.* at 88.

⁵⁹ *Id.*

⁶⁰ *Id.* at 89.

⁶¹ Radio Regulations, *supra* note 54, No. 428A.

⁶² S. LUTHER, *THE UNITED STATES AND THE DIRECT BROADCAST SATELLITE: THE POLITICS OF INTERNATIONAL BROADCASTING IN SPACE* 101 (1988).

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.* at 102.

cations Commission spokesman Steven Selwyn, who indicated that DBS regulations treat spillover issues as technical challenges.⁶⁶ That is, any legal questions on spillover incidents are handled on a technical basis. Since countries using DBS systems are required to install antennae meeting minimum performance standards, a presumption of unintentional spillover exists.⁶⁷

B. *Program Content*

The COPUOS Working Group on DBS has entertained a number of proposals to control the political, cultural, and commercial content of broadcast programs.⁶⁸ In 1970 the Soviet Union proposed eight principles for controlling content.⁶⁹ The proposal advocated prohibition of amoral or provocative broadcasts that might interfere with a nation's way of life.⁷⁰ The proposal also permitted retaliation by "any available means" against direct broadcasts transmitted without the prior consent of the receiving country.⁷¹ If this provision were interpreted literally,

⁶⁶ Telephone interview with Steven Selwyn, Federal Communications Commission, Washington, D.C. (March 1989).

⁶⁷ *Id.*

⁶⁸ See K. QUEENEY, *supra* note 2, at 58-60, 66-74, 97-111.

⁶⁹ *Model Principles for the Use of Artificial Earth Satellites for Radio and Television Broadcasting, Report by COPUOS' Working Group on Direct Broadcast Satellites*, U.N. Doc. A/AC.195/WG.3/CRP.1 (1970) [hereinafter *Soviet Model Principles*]. The provisions that most clearly identify the Soviet position are as follows:

Article IV. Direct radio and television broadcasts by satellite to the population of a foreign State may be carried out only with the express consent of the Government of that State.

Article V. . . . Radio and television broadcasts by satellite which include propaganda in favour of war, militarism, Nazism, national and racial hatred or hostility among peoples, and broadcasts which are amoral or provocative in nature or which in any other manner tend to interfere with the national life of States shall be deemed to be illegal. . . .

Article VII. In the event of direct broadcasts transmitted by satellite to another country without the consent of its Government, that Government shall be entitled to use any available means to counteract such broadcasts.

Id.; see QUEENEY, *supra* note 2, at 66.

⁷⁰ *Soviet Model Principles, supra* note 69 art. V.

⁷¹ *Id.* art. VII.

it would permit a receiving country to jam the radio waves of illegal broadcasts and to destroy the offending satellite. The Japanese were more specific in their suggested prohibitions, which included the banning of war propaganda, incitement to provoke subversive activities against the political institutions of the receiving countries, slander against the honor and dignity of the receiving countries, and criticism of the policies of the receiving country.⁷²

Both the 1972 and 1974 Soviet proposals presented to the Working Group continued to emphasize the broad principles of prior consent and control over the content of political and commercial programming.⁷³ Little progress was made because opponents of DBS regulations argued that restrictions on program content would interfere with the sovereign rights of states to administer their domestic media systems and, as a result, impede the flow of information.⁷⁴ No international consensus in favor of any proposed guidelines governing program content came out of these sessions.⁷⁵

The only international agreement binding its member states to content control was the Brussels Convention of 1974.⁷⁶ The Convention, however, specifically exempted DBS from its pronouncements.⁷⁷ The purpose of the Convention was to protect the property rights of copyrighted materials in programs that were broadcast with

⁷² QUEENEY, *supra* note 2, at 73-74.

⁷³ Paul, *supra* note 37, at 356. Jurisdictional control over program content continues to be a sensitive issue, particularly in the area of defamation by satellite. See Cooper, *Defamation by Satellite*, 132 SOLIC. J. 1021 (1988). A Canadian court, in *Jenner v. Sun Oil Co.*, 2 D.L.R. 526, 537 (1952), recognized the rights of a plaintiff in the receiving country by holding that, even if the cause of action arose in a foreign domicile, the origination of a broadcast beyond the jurisdiction of the foreign forum is of no consequence as long as a case is established showing that the signals were transmitted so as to be published within the jurisdiction thereby causing substantial injury to the plaintiff's reputation within the jurisdiction.

⁷⁴ Dausés, *supra* note 12, at 66.

⁷⁵ *Id.*

⁷⁶ Christol, *The 1974 Brussels Convention Relating to the Distribution of Program-Carrying Signals Transmitted by Satellite: An Aspect of Human Rights*, 6 J. SPACE L. 23 (1978).

⁷⁷ *Id.*

the assistance of satellites other than DBS.⁷⁸ The targeted offenders were poachers who might use DBS systems to intercept and rebroadcast such programs.⁷⁹ In their discussions, the delegates dealt with the issue of whether the factors of program content and the available methods of transmission should be treated separately in order to provide protection to the owner of the copyrighted materials while at the same time allowing the prospective recipients of such property to exercise their own judgments as to the suitability of the programs.⁸⁰

The Brussels Conference tried to distinguish between the intrinsic value of a program's content and the satellites' technical ability to transmit the program.⁸¹ The Soviet bloc countries lobbied for control over the program content of the originating states, but the delegates elected to deal only with the transmission of signals, not their content.⁸² This content debate and the traditional argument for unimpeded delivery of programming defeated the Soviet proposals and left the Convention with no international consensus on DBS restrictions.⁸³ On the other hand, the Convention did not deter receiving states from preventing the delivery of foreign-based programs.⁸⁴

The Brussels Convention did provide monetary protections to the owners of copyrighted materials by requiring the signatory states of the Convention to use reasonable measures to prevent the distribution of such property to unintended receivers within their designated jurisdic-

⁷⁸ *Id.* "Property values exist in the product of human ingenuity and creativity constituting the broadcast program." *Id.*

⁷⁹ *Id.* at 33.

⁸⁰ *Id.* at 23. "The subject of the treaty was not the content but the container." *Id.* That is, the focus was not upon program content but upon signal transmissions.

⁸¹ *Id.*

⁸² *Id.* at 23-24.

⁸³ *Id.*

⁸⁴ *Id.* at 34. Because of the format ultimately adopted, participating States were left to devise their own methods of dealing with the misuse of foreign programs. Remedies could include "penal sanctions, withdrawal of benefits, registration requirements, and other regulatory procedures." *Id.* at 25.

tions.⁸⁵ DBS systems were exempted from the Convention's final acts and left for negotiation in future sessions of the COPUOS Working Group.⁸⁶

The reluctance of the international community to agree on a set of content guidelines surfaced again in a working draft contained in the 1980 COPUOS legal subcommittee report.⁸⁷ Once again, the stalemate was attributable to the pluralistic nature of the international community where the Western democracies' principles of free speech were in direct conflict with the fear of offensive broadcasts exhibited by the Soviet block and the LDCs.⁸⁸

C. *Prior Consent*

Another approach in controlling DBS transmissions has been to require broadcasters to obtain the prior consent of receiving countries before broadcasting.⁸⁹ The requirement would satisfy the LDCs' recognized rights to regulate their telecommunications systems and to decide what types of social, political, economic, and cultural programming would be acceptable for their citizenry.⁹⁰ The Western countries have expressed the opposite view. That is, Western governments believe that the prior consent requirement would ultimately undermine the concepts of freedom of information and the maintenance of international peace and security.⁹¹ As in earlier sessions, the freedom of information advocates supported their position with Article 19 of the Universal Declaration of

⁸⁵ *Id.* at 33.

⁸⁶ *Id.* at 34.

⁸⁷ *Report of COPUOS' Legal Subcommittee's Eighteenth Session, Annex II, Appendix A, U.N. Doc. A/AC.105/240 (1980).*

⁸⁸ Paul, *supra* note 37, at 357.

⁸⁹ Comment, *supra* note 41, at 240. The prior consent requirement simply forces any state intending to establish DBS service to immediately notify and gain prior authorization from the receiving state.

⁹⁰ Dausen, *supra* note 12, at 65.

⁹¹ *Id.* "State sovereignty was interpreted by the opponents to the prior consent rule as compromising every state's right to maintain its domestic public media system free from control or restrictions imposed by others, *i.e.*, the receiving states." *Id.* at 65-66.

Human Rights.⁹²

Three specific prior consent proposals have come out of the debate on DBS regulation: Radio Regulation 428A,⁹³ the UNESCO Declaration on the Use of Satellite Broadcasting,⁹⁴ and the General Assembly Resolution on Principles Governing DBS.⁹⁵

1. *Radio Regulation 428A*

The longstanding ITU regulations of terrestrial broadcasting prohibit a state from intentionally or accidentally broadcasting to another state with a signal strong enough to interfere with the domestic broadcasting of the receiving state.⁹⁶ Radio Regulation 428A, as promulgated by the ITU in 1972,⁹⁷ minimizes radio transmissions over foreign countries through radio frequency coordination and technical design, but the language of the regulation poses the question of whether the receiving countries gave ongoing consent to the broadcast and participation in the programming.⁹⁸ In the 1977 ITU report, the United States, whose position rests upon an analogy to the ITU regulations of terrestrial broadcasting, made the argument that it was necessary to distinguish between direct television broadcasts by satellite that were meant for foreign states and those occurring as a result of unintentional spillover.⁹⁹ The United States emphasized that

⁹² *Universal Declaration of Human Rights*, *supra* note 43, art. 19.

⁹³ Radio Regulations, *supra* note 54, No. 428A.

⁹⁴ *United Nations Educational, Scientific and Cultural Organization's Declaration of Guiding Principles on the Use of Satellite Broadcasting for the Free Flow of Information, the Spread of Education and Greater Cultural Exchange*, U.N. Doc. A/AC.105/109 (1972) [hereinafter *UNESCO Declaration*].

⁹⁵ G.A. Res. 37/92, U.N. GAOR Supp. (No. 51) at 98, U.N. Doc. A/37/646 (1982).

⁹⁶ S. LUTHER, *supra* note 62, at 103. The ITU "regulations . . . prohibit a state from broadcasting to another state, intentionally or accidentally, with a signal that is strong enough to interfere with the domestic broadcasting of the recipient state." *Id.*

⁹⁷ Radio Regulations, *supra* note 54, No. 428A.

⁹⁸ S. LUTHER, *supra* note 62, at 101-05 (discussing generally the ongoing controversy over the right to prior consent generated by Radio Regulation 428A).

⁹⁹ *Id.* at 102.

prior consent would apply to direct television broadcasts and that ITU regulations would cover any technical issues, such as unintentional spillover.¹⁰⁰

The "prior consent" debate of the 1970s heated up because of the Canadian-Swedish position that Regulation 428A had the effect of international law when applied to DBS.¹⁰¹ Article VI of the Canadian-Swedish proposal required respect for the receiving state not only in a case where spillover might be considered technically avoidable by ITU (Regulation 428A) but also where the spillover might be technically unavoidable.¹⁰² In addition, the language of Article VI alluded to prior consent and the rights of the receiving states.¹⁰³

Opposing commentators, such as Carl Q. Christol, a professor and consultant for the United States government, reiterated that the position of the United States was that the ITU lacked the power to make and enforce decisions relating to international conduct because of its narrow concern with technical issues and notification procedures.¹⁰⁴ The ITU could not resolve the prior consent disagreement, Christol contended, because the proper forum for "unacceptable ideas and information" had always been, and should continue to be, within COPUOS.¹⁰⁵ Some of the shortcomings of applying Reg-

¹⁰⁰ *Id.*

¹⁰¹ *Id.* For a discussion of the Canadian-Swedish proposals, see *supra* notes 62-64 and accompanying text.

¹⁰² *Report by COPUOS' Working Group on Direct Broadcast Satellites*, May 2, 1973, U.N. Doc. A/AC.105/WG.3/14.

¹⁰³ *Id.*

Article VI. The right of consent and participation stated in Article V shall apply in these cases: (a) where coverage of the territory of a foreign State entails radiation of the satellite signal beyond the limits considered technically unavoidable under the Radio Regulations of the International Telecommunication Union or (b) where . . . the satellite broadcast is aimed specifically at an audience in that State within the area of spillover.

Id.

¹⁰⁴ S. LUTHER, *supra* note 62, at 104.

¹⁰⁵ *Id.* The ITU submits issues to members and requires a majority to prevail. But, COPUOS' practice is one of consensus. This operating difference may indicate that COPUOS is the appropriate arena for the "prior consent" debate. *Id.*

ulation 428A to prior consent requirements, however, include its failure to define what countries have standing to insist on prior consent, what kind of agreement must be reached to satisfy the regulation, and what sanctions are imposed for noncompliance.¹⁰⁶

As late as 1980, the United States arguments against prior consent continued to support the "free flow" approach.¹⁰⁷ Specifically, the United States urged that a requirement of prior consent could potentially extend beyond satellite regulations to become a precedent generally restricting the flow of international information, which would inhibit the free exchange of ideas. Insufficient experience with broadcasting was also cited as a justification for failing to support the proposed actions, and the United States contended that such guidelines could inhibit the advancement and testing of the technology. Furthermore, adequate protections were purported to exist in the form of current ITU technical regulations that govern unauthorized transmissions and avoid the need for political principles. The ability to withhold consent and deny regional broadcasts also could occur as a result of political incompatibility between nations such that the United States viewed the prior consent concept as practically unworkable.¹⁰⁸

Despite the United States position, as late as 1981, the ITU frequency allocations had not been made for direct broadcasting across national borders.¹⁰⁹ In fact, the member states of the ITU apparently were blocking legitimation of an international DBS system in an attempt to force the United States to agree with the prior consent principle by withholding authorized allocations for DBS in the HF, VHF, UHF, and microwave bands, which are the segments best suited for direct television broadcasting into individ-

¹⁰⁶ Paul, *supra* note 37, at 359.

¹⁰⁷ S. LUTHER, *supra* note 62, at 105.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 103.

ual receivers.¹¹⁰ As a result of these actions, the impasse on prior consent became the thorny issue that continued to delay international telecommunications between the United States and LDCs.

2. *The UNESCO Declaration On The Use of Satellite Broadcasting*

UNESCO completed its lengthy deliberations on the DBS controversy with the adoption of the Declaration of Guiding Principles on the Use of Satellite Broadcasting for the Free Flow of Information, the Spread of Education and Greater Cultural Exchange.¹¹¹ In Article IX the Declaration specifies that "it is necessary that States, taking into account the principle of freedom of information, reach or promote prior agreements concerning direct satellite broadcasting to the population of countries other than the country of origin of the transmission."¹¹²

Although not binding, the Declaration established an international consensus encouraging states to reach prior agreements before broadcasting and develop restrictions on program content.¹¹³ The Declaration's ambiguity, however, posed some of the same concerns surrounding the requirements of Regulation 428A.¹¹⁴ For example, the prior consent requirements did not clarify whether the broadcasters were to consult with only the target countries or whether they must consult with any country that objected to the broadcast material in general.¹¹⁵ Furthermore, the Declaration failed to indicate whether the receiving countries had to be consulted beyond the initial agreement or whether broadcasters could transmit at all if no agreement was reached.¹¹⁶

¹¹⁰ *Id.* at 104.

¹¹¹ *UNESCO Declaration*, *supra* note 94.

¹¹² *Id.*

¹¹³ S. LUTHER, *supra* note 62, at 85.

¹¹⁴ For a discussion of Radio Regulation 428A, see *supra* notes 54-67 and 96-110 and accompanying text.

¹¹⁵ Paul, *supra* note 37, at 359.

¹¹⁶ *Id.*

Article V of the Declaration implies that no prior consent is required.¹¹⁷ It provides that "[t]he objective of satellite broadcasting for the free flow of information is to ensure the widest possible dissemination . . . of news of all countries Satellite broadcasting . . . requires that every effort be made to ensure the factual accuracy of the information reaching the public."¹¹⁸ The exclusion of program control for the recipient country leaves the impression that prior consent is required but not in the context of programming decisions.

3. *The General Assembly Resolution*

The most refined of the UN resolutions dealing with prior consent is the 1982 Resolution of Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting.¹¹⁹ Adopted over the objections of the United States and most of Western Europe,¹²⁰ the resolution narrowed the DBS agenda to four items of dispute.¹²¹ First, disagreement existed as to whether the resolution should mandate or merely recommend acts of notice and consultation from the broadcasting service to the receiving state.¹²² But, the language of the resolution is notably couched in mandatory terms: "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

¹¹⁷ UNESCO Declaration, *supra* note 94.

¹¹⁸ *Id.*

¹¹⁹ Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting, 37 U.N. GAOR Supp. (No. 51) at 98, U.N. Doc. A/37/51 (1982) [hereinafter General Assembly Resolution 37/92].

¹²⁰ See S. LUTHER, *supra* note 62, at 111-12. The requirement of consensus in all COPUOS negotiations prevented the resolution from being presented to the General Assembly as a COPUOS agreement. The impasse in COPUOS over prior consent frustrated the Soviet Union delegation to the extent that it finally stepped in and proposed a draft resolution before the General Assembly. *Id.* at 111.

¹²¹ Anawalt, *Direct Television Broadcasting and the Quest for Communication Equality*, in REGULATION OF TRANSNATIONAL COMMUNICATIONS 361, 366 (1984).

¹²² *Id.*

intention and *shall* promptly enter into consultation with any of those States which so requests."¹²³ The final vote on this provision split the international community, with the developing nations casting the majority vote for mandatory language.¹²⁴

Second, the Resolution further calls for a prior consent regime and states that an international DBS service will be established only after the broadcasting and receiving states enter into consultations "regarding its activities in the field of international direct television broadcasting by satellite" ¹²⁵ The agreements between countries must also conform to the pertinent requirements of the ITU.¹²⁶ While the resolution is not legally binding and does not require "prior consent" per se, many of the developed nations have remained dissatisfied with the lack of consensus surrounding the resolution and the conspicuous absence of any language supporting the principle of free flow of information as advocated by the 1979 Canadian-Swedish proposal to COPUOS.¹²⁷

The third point of dispute was the question of state responsibility for DBS transmissions.¹²⁸ Paragraph 8 of the resolution approaches this issue with supplicatory language: "States *should* bear responsibility for activities in the field of international direct television broadcasting by satellites carried out by them or under their jurisdiction and for the conformity of any such activities with the principles set forth in this document."¹²⁹ The Canadian-Swiss dissent against state responsibility was the most vocal because government censorship could potentially curtail the free flow of information.¹³⁰

¹²³ General Assembly Resolution 37/92, *supra* note 119, at 98 (emphasis added).

¹²⁴ Anawalt, *supra* note 121, at 366.

¹²⁵ General Assembly Resolution 37/92, *supra* note 119, at 98.

¹²⁶ *Id.* at 98-99.

¹²⁷ Anawalt, *supra* note 121, at 366; *see also* Paul, *supra* note 37, at 361.

¹²⁸ Anawalt, *supra* note 121, at 366-67.

¹²⁹ General Assembly Resolution 37/92, *supra* note 119, at 98 (emphasis added).

¹³⁰ Anawalt, *supra* note 121, at 367.

The fourth area of debate was the reluctance of the developing nations to accept the United States position that international law should apply to DBS regulation.¹³¹ The United States viewpoint was that international law would not support state responsibility or the type of nontechnical prior agreements called for in the Resolution.¹³² The United States argued that DBS was sufficiently regulated by general international law as provided in article VI of the Outer Space Treaty.¹³³ The Treaty provides that international responsibility for telecommunications is borne by the organization carrying out the satellite activities (such as INTELSAT, EUTELSAT, ARABSAT and others) and the participating States that are parties to the Treaty.¹³⁴ Despite this argument, the United States could not assure a consensus on the free flow of information principle.¹³⁵ Therefore, lip service was given reluctantly to the concept of prior consultation, and in doing so, the United States again stepped away from its elusive goal of unimpeded transnational communications.¹³⁶

Although General Assembly Resolution 37/92 is not legally binding, its interpretation supports several arguments. First, it is advocated that, even in the absence of an agreement, DBS cannot be used without prior consent.¹³⁷ Second, DBS transmissions to the noncomplying country constitute "harmful interference" and are therefore prohibited by the International Telecommunications Convention.¹³⁸ A rebuttal argument is that, other than technical restrictions, no theory of international law bars

¹³¹ *Id.*

¹³² *Id.* Some observers thought that the United States might be willing to accept a consensus draft as long as it relied primarily on existing international regulation of the radio spectrum. *Id.*

¹³³ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, United States-United Kingdom-USSR, art. VI, 18 U.S.T. 2410, 2415, T.I.A.S. No. 7347 [hereinafter Outer Space Treaty].

¹³⁴ *Id.*, 18 U.S.T. at 2415; N. MATTE, *supra* note 12, at 82.

¹³⁵ Anawalt, *supra* note 121, at 367.

¹³⁶ *Id.* at 368.

¹³⁷ Paul, *supra* note 37, at 362.

¹³⁸ International Telecommunications Convention, Final Protocol, Additional

international DBS broadcasts.¹³⁹ Despite these remaining conflicts, the Resolution did much to reaffirm the interdependence of nations in global communications by focusing upon the necessity of all nations to practice accommodation and understanding, which will facilitate an inoffensive exchange of cultural and educational information.¹⁴⁰

This review of the initiatives supporting a unified global DBS system has brought a multitude of both positive and negative implications. The political barriers of spillover, national sovereignty, free flow of information, prior consent, and program content have put the future of DBS globalization into question. Ironically, INTELSAT has lost its monopoly status as other regional and national satellite systems have been launched and placed in higher frequencies of the radio spectrum.¹⁴¹ Several recent developments, however, may indicate a need to move forward with a globalization plan in which a common carrier is operated via individual regional systems.

IV. RECENT DEVELOPMENTS

Recent events have highlighted additional concerns that must be addressed as DBS continues to develop. First, Third World countries have expanded their use of telecommunications in an attempt to attain a greater voice in world affairs.¹⁴² As a result, they are calling for some form of planning to ensure equitable access to the geostationary orbit and frequency spectrum resources required for satellite communication.¹⁴³ The access debate centers

Protocols, Optional Additional Protocol, Resolutions, Recommendations and Opinions, 1982, art. 35; see Paul, *supra* note 37, at 362.

¹³⁹ Paul, *supra* note 37, at 362. Technical restrictions are supplied by Radio Regulation 428A. *Id.* For a discussion of Radio Regulation 428A, see *supra* notes 54-67 and accompanying text.

¹⁴⁰ Powell, *Towards A Negotiable Definition of Propaganda for International Agreements Related to Direct Broadcast Satellites*, 45 LAW & CONTEMP. PROBS. 3, 34-35 (1982).

¹⁴¹ W. HOWELL, *supra* note 6, at 253.

¹⁴² S. AYALA, *supra* note 11, at 6.

¹⁴³ See Use of the Geostationary-Satellite Orbit and the Planning of the Space Services Utilizing It, 2 FCC Rcd. 3843, 3844 (1987) (describing groups to study

upon the "first come, first served" orbital assigning process, which has heretofore resulted in limited access to the LDCs incapable of building, launching, and maintaining such systems.¹⁴⁴ The utilization of the geostationary orbit fuels the debate because only a limited number of satellites can be placed in the orbit without causing mutual interferences.¹⁴⁵ Proposals for orbital allocation are also considered in light of national claims to portions of the geostationary orbit.¹⁴⁶ These fractured negotiations will not reach compromise without greater international cooperation.

Second, the program of implementing national DBS systems has not been as lucrative as originally anticipated.¹⁴⁷ For example, the withdrawal of DBS applicants in the United States illustrates the economic restraints and financial uncertainties of establishing effective DBS systems.¹⁴⁸ In addition, technological and economic DBS

allocation and use of geostationary satellite orbits); see also Mahoney, "Space WARC '85: Negotiating Competitive Forces," J. COMMUNICATIONS, Summer 1985, at 60 (discussing the 1985 World Administrative Radio Conference).

¹⁴⁴ B. SIGNITZER, REGULATION OF DIRECT BROADCASTING FROM SATELLITES 12 (1976). While the "first come, first served" policy allows each nation an equal chance to acquire the slots available, opponents argue that the 180 available geostationary orbital spaces are a limited natural resource of all mankind. As such, a cooperative effort should emerge to ensure access to countries with limited technology. *Id.* at 12-13.

¹⁴⁵ Gorbziel, *The Legal Status of Geostationary Orbit: Some Remarks*, 6 J. SPACE L. 171 (1978).

¹⁴⁶ Current Documents, *The Bogota Declaration*, 6 J. SPACE L. 193 (1978). In December 1976, seven equatorial countries issued the Bogota Declaration claiming a right of permanent sovereignty over the portions of the GSO directly above their respective territories. *Id.* The Declaration embodies five principles. First, the GSO is defined as a natural resource derived from the earth's gravitational pull and "an integral part of the territory over which the equatorial States exercise their national sovereignty." *Id.* Second, those segments of the GSO that correspond to areas of the high seas are "the common heritage of mankind." *Id.* at 195. Third, the equatorial countries will permit other countries' satellites to pass above their territories only if outside of their GSO. Fourth, satellites can enter the GSO over an equatorial country only with the prior and express permission of that country and are subject to the national laws of that country. Fifth, prior use of a portion of the GSO by a foreign country does not confer any present or future right to the use of the orbit. *Id.* at 194-95.

¹⁴⁷ Anderson, *The Economic, Legal and Scientific Implications of Direct Broadcast Satellites*, COMM. & LAW, Feb. 1985, at 3, 5.

¹⁴⁸ *Id.*

requirements, competition from existing media, and rising construction costs are all affecting the success of a national DBS system.¹⁴⁹ The benefits of these start-up and maintenance expenses may only be cost-effective in an international system.

Third, the shift toward privatization of European regional DBS systems has triggered concerns about competition and coordination.¹⁵⁰ As privatization activity increases in anticipation of the 1992 European Economic Community unified market, the variable regulatory systems of participating countries are complicating the operation of national systems.¹⁵¹ The transition from state to private ownership will necessitate cooperation and coordination between regional and national systems.

Fourth, the International Telecommunications Union

By September 1983, eight companies, including [Satellite Television Corporation, a subsidiary of COMSAT], had been granted conditional construction permits to build DBS systems. . . . Only three of the original eight companies are expected to actually establish DBS networks, while the three wealthiest applicants—CBS, RCA (parent company of NBC), and Western Union—withdraw their applications on grounds that such a television medium was not economically viable.

Id. (footnotes omitted). See also *Launch Failures Changing Satellite Business*, BROADCASTING, July 14, 1986, at 57 (discussing the impact of launch failures upon companies' decisions not to invest in new satellites).

¹⁴⁹ Anderson, *supra* note 147, at 8. For example, a single nationally offered DBS channel, according to satellite manufacturer RCA, has operating costs of approximately \$30 million annually, but leases for the C-band satellite channels that are currently used by television networks and cable average only \$1.5 million. "The high cost of DBS makes it a questionable venture," claims Rick Boyland, broadcasting manager of RCA Americom. "When you look at the presence of cable . . . and new video technologies such as multi-point distribution . . . that means an awful lot of competition." *Id.* In 1982, the cost of constructing two DBS satellites, one to transmit in the eastern half of the United States and the other to use as a spare, was \$113 million. *Id.* "Actual construction costs total[ed] over \$60 million with another \$53 million being charged for developmental and performance costs." *Id.*

¹⁵⁰ *Will DBS in Europe Meet the Same Fate as in U.S.?*, BROADCASTING, Jan. 27, 1986, at 58 (reviewing problems of competition for market share between DBS operators and established terrestrial broadcasters).

¹⁵¹ *The Privatization of Europe*, BROADCASTING, Mar. 31, 1986, at 61 (summarizing European telecommunications developments); see also *In Brief*, BROADCASTING, Mar. 20, 1989, at 16 (reporting that demand for orbital slots above the United States exceeds availability).

has come under pressure from insurgent commercial and political interests of Third World countries.¹⁵² In particular, the political conflicts over Third World access to the geostationary orbit turned the 1985 World Administrative Radio Conference (WARC-85) into a confrontation of politics and ideology.¹⁵³ The recent threat of a United States withdrawal from the ITU may encourage the group to limit its involvement to the technical operation of radio services rather than the brokering of equitable access.¹⁵⁴

These recent developments add to the longstanding concerns regarding spillover, national sovereignty, and prior consent. Improvements in signal-scrambling technology and constraints on receive-only satellite dishes, however, may help to resolve the concerns about global DBS systems.¹⁵⁵ With these present barriers to a global DBS system in mind, the next section explores why DBS globalization is realistic and necessary for international accord.

V. ADVANTAGES OF A GLOBAL DBS SYSTEM

Theoretically, there are at least four primary advantages to the globalization of DBS systems. First, DBS technology can eliminate the need for countries facing natural and man-made barriers to construct high-cost, terrestrial communication networks. That is, unlike DBS, conventional telecommunications systems are impeded by the impenetrable barriers of buildings and indigenous deserts, mountain ranges, and rivers.

Furthermore, the construction and maintenance of

¹⁵² Mahoney, *supra* note 143, at 60-61.

¹⁵³ *Curtain Going Up on Space WARC*, BROADCASTING, Aug. 5, 1985, at 74 (summarizing the controversies as they existed immediately preceding the conference).

¹⁵⁴ Comment, *supra* note 41, at 242; see also Comment, *Direct Broadcast Satellites: Protecting Rights of Contributing Artists and Broadcast Organizations*, 12 CAL. W. INT'L L.J. 213 (1982) (discussing problems with regulation of the content of DBS transmissions).

¹⁵⁵ See Powell, *supra* note 140, at 31-32. "The success of the ITU in achieving general international agreement on many of these specific matters lends hope for resolving the problems of acceptable DBS programming." *Id.*

cables and wires to facilitate audio, data, and voice transmissions becomes economically prohibitive as the conductors stretch across continents. Unlike cable transmission, satellites can deliver messages to multiple targets from a single point.¹⁵⁶ As previously noted, the launching of a global DBS network is extremely expensive, but the distance between transmissions has little impact on operating costs and the ongoing equipment needs are minimal. Moreover, DBS satellites are the only technology available that radiate enough power to cover a large geographic area and provide sufficient signals to penetrate small ground equipment.¹⁵⁷ Just one DBS transponder can transmit both radio and television programs to an entire country thereby linking hundreds of cities to its reception.¹⁵⁸ This high capacity makes DBS the most opportune means for establishing a telecommunications network—domestically, regionally, and globally.

A second advantage of globalization is that DBS systems promote informational and cultural exchanges as well as contribute to economic development. DBS broadcasting would impact the world economy by expanding the local marketplace to worldwide proportions. International franchises and subsidiaries could reach a wider market and thereby increase their profits. Competition would also increase as a result of the international consumer's direct access to price and product information. All the activity surrounding the dissemination of information would stimulate further growth in various economic sectors.¹⁵⁹

Third, the globalization of DBS can encourage growth

¹⁵⁶ See Payne, *supra* note 7, at 98 (Cable proponents argue that, despite the single point to multiple target capability of satellites, new optical glass fiber cables provide faster, clearer transmissions that cannot be tapped.)

¹⁵⁷ See generally J. BITTNER, BROADCASTING AND TELECOMMUNICATION 151 (1985) (presenting an overview of several types of DBS systems and applications).

¹⁵⁸ B. SIGNITZER, *supra* note 144, at 10-11.

¹⁵⁹ See J. BITTNER, *supra* note 157, at 155. "Theoretically, a popular world program produced by a small less-developed country, could attract enough world advertising to affect that country's balance of payments." *Id.*

in the political sector. Not only is this telecommunications system an excellent method for politically unstable countries to centralize diverse minorities, but it is especially critical to the security of governments who must rely upon international communications with their allies and military forces.¹⁶⁰ As a result, global DBS systems become a vital link to economic and political stability and growth. Therefore, the political growth stemming from DBS globalization would be transnational in scope, reaching both developed and underdeveloped nations.

Finally, DBS is an excellent broadcasting alternative for the dissemination of entertainment, educational, and instructional programming. Perhaps the most promising advantage of a global DBS system is its capability to educate the world. For example, satellite-borne educational television could function to reduce illiteracy, provide universal primary education, extend secondary and higher education, increase present educational systems' efficiency, and equalize educational opportunities in developing countries.¹⁶¹

Significant satellite projects have also been initiated to improve medical care and education by providing increased access to doctors and medical personnel.¹⁶² An example of this effort was the Rural Satellite Program, financed by the United States Agency for International Development, through which educators and physicians in Peru received programs covering in-service training, premedical treatment diagnoses, and general information sessions.¹⁶³ Such initiatives point to the value of providing DBS services to underdeveloped areas that deserve

¹⁶⁰ See generally A. BRANSCOMB, *TOWARD A LAW OF GLOBAL COMMUNICATIONS NETWORKS* 217, 217-21 (1986). The United States government, in conducting foreign and military affairs, represents the largest single user of telecommunications in the world. *Id.*

¹⁶¹ B. SIGNITZER, *supra* note 144, at 14.

¹⁶² *Id.* at 15.

¹⁶³ Smith, *Reaching Those Hard to Get Places*, *INT'L J. SATELLITE COMM.*, Nov. 1985, at 31.

greater access to the existing global telecommunications networks.

The consummate example of DBS potential for LDCs was the Satellite Instructional Television Experiment (SITE). The NASA Application Technology Satellite (ATS-6) was placed in orbit over Kenya to broadcast programs on modern health, hygiene, and agricultural practices to remote villages in India.¹⁶⁴ For the first time, all regions of India were merged into a national information network. The success of this experiment shows that DBS technology is an efficient and effective method for linking isolated regions and establishing political and cultural unity.

The implementation of a global DBS system brings with it a number of concerns that are currently hindering international cooperation. In analyzing these concerns, the following sections compare the problems facing a fixed satellite system (FSS), such as INTELSAT, with those faced by a broadcast satellite system (BSS), such as the proposed global DBS system.¹⁶⁵ The following discussion deals with the central concerns of competition, coordination, and equitable access. Methods by which a global DBS system can cope with these concerns are also presented.

A. Competition

The INTELSAT monopoly within the international telecommunications market has gradually been eroded through increased competition from regional (for-profit) satellite systems such as ARABSAT and EUTELSAT.¹⁶⁶

¹⁶⁴ J. BITTNER, *supra* note 157, at 145; *see also* B. SIGNITZER, *supra* note 144, at 15-16.

¹⁶⁵ W. HOWELL, *supra* note 6, at 247. The fixed satellite system (FSS) relays telephone, data, and radio signals from one point to another (point-to-point) or to many other ground stations (multipoint). A broadcast satellite system (BSS) transmits radio and television signals from a number of originating programming services to other terrestrial broadcast or cable transmitters. Direct broadcast satellites (DBS) beam radio and TV program signals from originating stations directly to homes via high-powered satellite transmitters. *Id.*

¹⁶⁶ Snow, *Arguments For and Against Competition in International Satellite Facilities and*

In addition, the deregulatory climate of the Reagan administration allowed the Federal Communications Commission (FCC) to grant qualifying authority to five United States companies to compete with INTELSAT.¹⁶⁷

Deregulation is advocated by developed countries because competition will likely mean higher quality transmissions and lower prices.¹⁶⁸ This will in turn make the technology more financially accessible to more users. Under INTELSAT's present nondiscriminatory price averaging, charges for circuit use are identical for both low-volume and high-volume users.¹⁶⁹ The query is whether the competition will prevent INTELSAT from meeting the needs of a low-cost system in LDCs. The large receiving dishes necessary for systems like INTELSAT may become too expensive for many countries.¹⁷⁰ These shortcomings may add up to cost inequities for LDCs.

Competition also puts pressure on existing organizations to be innovative and price their products according to specific market costs rather than to achieve monopoly level profits.¹⁷¹ Furthermore, the entry of new systems into the international market can facilitate not only tech-

Services: A U.S. Perspective, J. COMMUNICATIONS, Summer 1985, at 51, 51-59; see also *In Brief*, BROADCASTING, Mar. 20, 1989, at 16.

Cable News Network became first non-INTELSAT video service provider from U.S. to Latin America in December 1988 after deal with Pan American Satellite Corp. PanAmSat saw its first satellite, PAS 1, go into orbit June 15, 1988, aboard Airanspace rocket launched from Kourou, French Guiana. The satellite is intended to provide domestic services in South American countries as well as international services.

Id.

¹⁶⁷ *PanAmSat Signs Peru as First Partner*, BROADCASTING, Apr. 14, 1986, at 44-45; see also Payne, *supra* note 7, at 94.

¹⁶⁸ Payne, *supra* note 7, at 94.

¹⁶⁹ W. HOWELL, *supra* note 6, at 253.

¹⁷⁰ Anderson, *supra* note 147, at 7 n.12. "The larger the receiving dish, the higher the cost. DBS dishes will allegedly be sold for \$400-\$600. More realistic figures put the price tag closer to \$500-\$800. Dishes for medium powered satellites sell for between \$800-\$1,000 while low-powered satellites range in cost from \$1,000-\$3,000." *Id.*

¹⁷¹ Snow, *supra* note 166, at 69.

nological progress and competitive pricing but also an increased diversity and choice of systems.¹⁷² The LDCs that oppose deregulation argue that natural monopolies foster economies of scale and instill favorable organizational customs and preferences.¹⁷³ This schism of thought continues to hamper international progress for DBS systems.

Nevertheless, competition concerns can be dealt with by a global DBS organization in several ways, including the following: implementation of a pricing system that shows the realistic demand-supply situation for regional and national users; initiation of periodic cost and technology studies to prevent cream-skimming¹⁷⁴ and to promote technological development; and provision of financing alternatives and incentives to nations in need.¹⁷⁵

B. *Coordination*

The privatization of telecommunications systems, such as the Japanese Nippon Telegraph and Telephone System and similar actions in France, Spain, and Sweden, portend the governmental release of bureaucratic and executive control over their DBS telecommunications systems.¹⁷⁶ As this race towards space accelerates, the need for coordination is critical to deal with such issues as spillover, national sovereignty, and prior consent. Despite the UN initiatives targeting these issues, solutions are not guaranteed.¹⁷⁷ The rush for privatization highlights these concerns and makes the search for alternatives even more urgent. That is, decisions as to what measures will adequately diminish the problems of coordination are essential to the development of a global DBS system.

¹⁷² *Id.* at 68-69.

¹⁷³ *See generally id.* at 69.

¹⁷⁴ *Id.* at 65-66. Cream-skimming refers to the underpricing rate structures used by competitors on heavy routes, such as the North Atlantic or Pacific traffic, which causes the existing international system to lose profits needed to subsidize thin routes. *Id.*

¹⁷⁵ For a further discussion of INTELSAT defenses against competitive forces, see Snow, *supra* note 166, at 65-68.

¹⁷⁶ *In Brief, supra* note 151, at 16.

¹⁷⁷ W. HOWELL, *supra* note 6, at 264-269.

To thwart reception of certain broadcasts by illegal satellites, regional systems, such as ARABSAT, are presently scrambling their uplink telemetry systems to obstruct interferences with spacecraft.¹⁷⁸ Scrambling also reduces the spillover of unacceptable television programming by other countries with the same satellite footprint. The use of a common-carrier system, such as INTELSAT, but with a global or regional scope, could resolve the problem of program content because individual countries could make autonomous programming decisions. Furthermore, regulation of receive-only dishes could reduce spillover.¹⁷⁹ For example, Pan-European telecasts from foreign systems are limited because of a recent ban on receive-only receptors.¹⁸⁰ Although scrambling technology and equipment regulation may increase the initial costs of a global DBS system, participating nations would absorb the costs, which would seem to preserve the national sovereignty of those countries concerned with cooperation and coordination activities.

C. *Equitable Access*

A third concern directly related to the function of the ITU is the equitable distribution of the slots in the geostationary orbit.¹⁸¹ The focus is upon how to make the wealth and technology of the West more accessible to Third World countries without encouraging their dependence upon and subjection to Western culture and capital. The United States objects to the "a priori" planning solution, which would allot orbital slots to countries on an equal basis without regard to their ability to use them.¹⁸²

¹⁷⁸ *ARABSAT Satellite's Control Signals Will Be Encrypted*, *AV. WK. & SPACE TECH.*, May 21, 1984, at 176, 176-77.

¹⁷⁹ *The Privatization of Europe*, *supra* note 151, at 61.

¹⁸⁰ *Id.*

¹⁸¹ S. LUTHER, *supra* note 62, at 144. More than 150 satellites now operate in the orbit, and they are owned primarily by INTELSAT or the United States. Therefore, the United States denounces the call for allocation of slots on an equal basis without considering the needs or capabilities of the country. *Id.*

¹⁸² *Id.*

The United States argument is that advancing technology will allow the placement of satellites just two, rather than three or four, degrees apart, which will make more room when it is actually needed. Other nations, however, are demanding an end to the current "first come, first served" policy prevailing in ITU regulations.¹⁸³

Although the allocation of DBS channels and orbital spaces among regional countries has resolved these conflicts to some extent,¹⁸⁴ the globalization of a DBS system may conserve geostationary orbit allocation more effectively. This globalization could be accomplished by first establishing regional, multi-administrative entities to alleviate allocations for national DBS systems. The result would be equitable access for the LDCs and developed nations alike. In addition, the grouping of several nations into a regional system could reduce the financial burden a nation normally would have in developing its own national DBS network. Multinational meetings also could be held to coordinate the requirements of each nation's DBS system and its geostationary orbit allocation.¹⁸⁵

In sum, the primary objectives of a global DBS system are to prevent competitive strongholds, coordinate activities of privatization, and ensure access to all. The political conflicts that have delayed the implementation of a global DBS system, however, also will require concerted negotiations and common international goals.

VI. *Emerging Technology*

While the focus of this article has been upon what entities will control global DBS systems, the issues of prior consent and access to the geostationary orbit have consequences for other types of international satellite telecommunications, such as FSS and BSS.¹⁸⁶ The following

¹⁸³ *Id.*

¹⁸⁴ *Space WARC Reaches a Consensus*, BROADCASTING, Sept. 16, 1985, at 41.

¹⁸⁵ *The Privatization of Europe*, *supra* note 151, at 61-62.

¹⁸⁶ S. LUTHER, *supra* note 62, at 136. For a discussion of FSS and BSS, see *supra* note 165 and accompanying text.

discussion will review some of the emerging technology and how it will affect the world politics surrounding the development of satellite communications.

One technological trend is the increased usage of small, less-costly earth station dish antennae, which are now being used for satellite radio and television transmissions. Utilization of these antennae for transmissions is made possible by an ultrahigh-frequency range ("Ku-Band").¹⁸⁷ As a result, the lower cost will generate greater demand by the world's population. Also, the use of analog and digital transmissions, whereby the video portion of a telecast is accompanied by an audio in several languages, has reduced the language barriers that would normally inhibit telecasting into foreign countries. The viewer is free to make his choice of language.¹⁸⁸

Digital transmissions have also led to the emergence of a technology called "enhanced" or "high-definition" television (HDTV), which results in a superior television picture.¹⁸⁹ These improved video transmissions are possible through the use of extremely high microwave frequencies (in the gigahertz range). The catch is that the "high-definition" signals require a different type of television receiving set from those currently used in the United States.¹⁹⁰ Removal of this reception barrier would require worldwide agreement on a single standard for receiving sets.

Another notable trend is the rapid evolution of sound broadcasting via DBS, which requires either new radios or frequency converters for the adaptation of conventional radio sets to higher wavelengths.¹⁹¹ Radio DBS requires

¹⁸⁷ S. LUTHER, *supra* note 62, at 137.

¹⁸⁸ *Id.*

¹⁸⁹ *Id.* Japan has been a forerunner in "high-definition" television technology, which involves a digital system of signal projection and processing. The system transmits signals by digital code, which is the format used in computers, rather than by the analog system, which is a continuous electronic signal. The television screen, in effect, becomes the display component of a minicomputer. *Id.* at 185 n.1.

¹⁹⁰ *Id.* at 137. Segments of the spectrum have been specifically allotted to experimentation with direct radio-signal transmissions via satellite. *Id.*

¹⁹¹ *Id.*

less bandwidth space in the geostationary orbit than does television DBS, and thus it may be more cost-effective.¹⁹² Operations, however, must be in accord with ITU rules and regulations.

VII. CONCLUDING OBSERVATIONS

The accelerated demands of developing nations for emerging space-based telecommunications services and the requirements of international regulatory initiatives are limiting the options of the United States in its effort to disseminate worldwide information. It will become more difficult for the United States to justify its unfettered approach in international communications without prior agreement with other countries. The demand for more equitable access to the channels of information will continue as long as the developing nations see their survival and development dependent upon the substantive flow of information.

Conversely, the launching of satellite systems may be beyond the reach of the nations that are in greatest need of survival information systems. The enormous cost and inherent power of such systems may preserve the status quo for the Western cultures who want to expand their markets and extend the standards of Western ideology. This position is reinforced by the world role of the United States through its military control of information systems. The probability of equalizing this control is questionable in light of the prolonged confrontation that will continue within the international bodies of the United Nations.

Telecommunications technology has become an integral component in these times of rapid information dissemination and social change. As the technology gains momentum, traditional standards and centers of control will be affected. International agreements and regulatory bodies will no longer stem the tide of social and cultural change. The changes are imminent. The question is

¹⁹² *Id.*

whether the hand of censorship will overcome the positive results of information globalization.

In assessing the future of international programming by DBS systems, the focus shifts to the United Nations and its ability to debate and reach compromise on the issues of prior consent, national sovereignty, program content, and equitable access to the technology. On balance, the decades of negotiations and resulting resolutions in both ITU and UNESCO should be judged as solid achievements. Unfortunately, the lack of consensus falls short of the goal of international cooperation, but a suggested mode of cooperation has been set forth in which broadcasters and receiving states can work successfully.

The current state of telecommunications development reasonably suggests that international direct television broadcasting is near fruition. Nevertheless, governments in power may be tempted to employ censorship, and if so, their efforts must be met head on with all the persuasion that progressive nations can muster. Certainly, the concern of individual countries about the intrusion of foreign cultures is understandable. Likewise, the threat of cultural standardization is a valid one. The natural reaction to censor, however, should be met by a recognition of the need of all peoples to express and continue to develop their own national ideas.