Satellite Telecommunication Regulation and Development in Latin America

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I. Introduction.

Telecommunication has permitted the development of what is known today as the Global Information Infrastructure. It is generating myriad networks around the globe through which technology is being harnessed to create a vast flow of data and information that will enable and support applications to serve people in all aspects of their daily lives. Fiber optic cables, separate satellite facilities, and regional and foreign satellite systems have allowed for the provision of transatlantic telecommunication. In Latin America, telephony, data, videoconferencing, fax, and telex applications constitute the mainstay of telecommunication earth stations in the region.

As a consequence, satellite telecommunication can no longer be seen as a service by itself. It is now a facilitator of economic development, a source of global competitive advantage, a provider of social and welfare benefits, a contributor to reducing regional disparities, and a provider of information for the general elevation of the population. It plays a critical role in foreign relations, national security, emergency and health services, education, commerce and other economic activities. Moreover, it can be used to encourage self-reliance, strengthen the social fabric and sense of national identity, and contribute to political stability. As such, satellite telecommunication is an indispensable component of Latin America's development process.

Albeit satellite telecommunication can today link all countries, there is still a wide disparity in the extent and quality of service and technology between industrialized and developing countries, and within developing countries between urban and remote areas. This reflects differences in economic capability, historical experience and in the priority given to investment in this sector. The leading theory for explaining the existing disparity is the "first come, first serve" practice of states, which has allowed for the monopolization of the telecommunication industry by the developed countries, since the practice was incorporated in international communications law long before a majority of developing countries became full members of the community of nations.
In this context, Latin American countries are faced with a traditional international telecommunication system which does not protect their interests since they did not participate in its formulation. These countries have, however, recognized the need to become active players in the formulation and development of international law to regulate telecommunication. More specifically, their participation in the regulation of space and satellite telecommunication, which are the lifeblood of all other international communication, is essential. In an attempt to narrow the broad spectrum of international telecommunication regulation and development, this paper concentrates on satellite telecommunication in Latin America. It analyzes the most important factors affecting Latin America's satellite telecommunication development. The first factor is the major players influencing satellite telecommunication policy in the region, which include regional agreements such as NAFTA. The second factor is a number of issues particular to the region which are affecting satellite telecommunication in Latin America. The interaction of these players and issues has begun to reshape the traditional international telecommunication system to include the particular interests and needs of Latin American countries with respect to telecommunication. Given its strong commitment to achieving a balance between its telecommunication development and regulatory framework, Peru's telecommunication development experience is used as an example throughout this paper.

II. Major Players Affecting Satellite Telecommunication in Latin America.

Satellites have proven to be one of the most effective and competitive ways to communicate, whether by voice, computer, fax or video by anyone from anyplace at anytime to anywhere on the planet. In 2001, Latin America is forecasted to take 22.3% of the world's fixed satellite ground segment equipment market. Today, satellite service providers attempt to satisfy the needs of Latin America's eighty million-plus television households. Changes in the regulatory environment, most notably in Argentina, Chile, Colombia, Mexico and Venezuela have opened up new markets, attracted foreign investment and increased competition. Still, regulation and development of satellite telecommunication in the region is strongly dependent on the practices of several international players. An introduction of the major players and their activities follows.

A. ITU.

The International Telecommunications Union ("ITU") is a specialized agency of the United Nations and an intergovernmental organization of 169 member countries,

9. Id.
10. See Press Release, infra note 86, quoting C. Michael Armstrong, Chairman and Chief Executive Officer of Hughes Electronics.
12. Id.
founded in 1865 to unify the regulation and use of telecommunications. Currently, the ITU establishes technical standards, regulations, and operating procedures for the industry. It has also steadily increased its authority over satellite communications by establishing new international legal norms to ensure the uniform and undisputed use of this resource.

By sharing information, developing standards, and adopting regulatory provisions that represent the common rules of the business, the Geneva-based ITU has played a unique part in the development of today's worldwide telecommunications network. It was, however, established to service the interests of national governments and telephone operator monopolists.

The accelerated trend towards the privatization and liberalization of markets, the fact that technological convergence has eroded the once stable borderlines between broadcasting, telecommunication and computing, in addition to wealth creation and competitive edge seen as dependent on the efficient use of telecommunication and information technology, forced the ITU to adapt to a new and dramatically shifting environment. To this end, the ITU created a High Level Committee ("HLC") in 1991 to review how the ITU should be structured to survive a changing telecom environment.

One of the key issues before the HLC was the special needs of developing countries or LDCs. Since the early 1960s, the LDCs had been active in the ITU to attempt to improve and democratize its functioning and to effect an equitable sharing of two areas recognized as limited natural resources — the radio frequencies and the GSO positions. Although the LDCs have been relatively successful in the democratization and improvement of the functioning of the ITU, their efforts to establish an international regulatory regime for equitable sharing of radio frequencies and an orbital position have been less successful.

13. ITU Policy, supra note 4, at 1.
14. Id.
15. Id., citing International Communications Convention, Nov. 12, 1965, 18 U.S.T. 575. Until the enactment of the 1992 Constitution and Convention, the ITU operated on the basis of an International Convention which was periodically elaborated by Plenipotentiary Conferences, taking place every five to ten years, in the form of an international treaty among its members. Id. The basic structure of the ITU dates back to the late 1940s and consisted of five permanent organs: The General Secretariat, which includes the Technical Cooperation Department, the International Frequency Registration Board, the International Consultative Committees (CCITT), and the Telecommunications Development Bureau, created in 1989 in recognition of the significance of telecommunications development to a country's economic and social stability. Id. In 1993, the standarization activities of the CCITT and the International Radio Consultative Committee (CCIR) were grouped together in the telecommunications standarization sector. The other activities of the CCIR (mainly tasks linked to the rational management of the radioelectric frequency spectrum in terrestrial and space telecommunications) were integrated in a new radiocommunication sector.
17. Id.
18. Jakhu, supra note 8, at 385.
19. Id.
ITU's initial response to LDC's concerns was the creation of the Telecommunications Development Bureau (the "BTD") at the Nice 1989 Plenipotentiary Conference, with its primary function to promote worldwide telecommunications development.20 As a result of the BTD, the ITU's mandate was expanded to comprise four distinct goals — international interoperability of national communication networks, equitable management of the radio frequency spectrum, management of the geostationary satellite orbits, and telecommunication development.21

This initial response to LDC's concerns was, however, handicapped by the ITU's internal bureaucracy and the fact that it continued to operate under procedures that were, in many cases, more than fifty years old.22 In practice, failure to react quickly to the new environment led organizations such as the European Community, the Organization for Economic Cooperation and Development, and the General Agreement on Tariffs and Trade to encroach on ITU activities.23

The ITU has since taken a number of steps to strengthen its international role. ITU's new Constitution and Convention, signed in 1992 and in force since 1994, replaced the ITU Convention signed in Nairobi in 1982 and represents ITU's first basic instrument intended to be permanent. The 1994 Plenipotentiary Conference restructured the ITU under three new goals: development, standardization and radiocommunications.24 Further, the World Telecommunications Advisory Council was created in 1992 to advise the ITU's Secretary General from public and private sector perspectives.25 This Business Advisory Forum or WorldTel was established in recognition that the industry is now less government and more business oriented. Its mission is to provide financial assistance, access to financial sources, leading edge technologies and management practices, neutrality in providing systems, and information and advisory practices.26

The ITU restructuring and its leading participation in telecommunication policy and development is beginning to allow LDCs to take on a much more important role in the formulation of telecommunication policy and in strengthening telecommunication development in their own countries. For instance, the HLC recognized that multilateral institutions provided only about five percent of the resources needed for telecoms devel-

20. See Brian Harris, The New Telecommunication Development: Bureau of the International Telecommunications Union, 7 AM. U.J. Int'l. L. & Pol'y 83 (1991). The specific duties of the BTD include: (i) educating policy makers on the importance of telecommunication; (ii) working with national, regional, and international bodies to promote the growth of telecommunication; (iii) seeking private industry's participation in telecommunication development; and (iv) assisting in the formulation of a general plan for telecommunication development and supporting development conferences. Id. at 90-91.

21. Id. at 89-90.

22. See ITU Dynamism, supra note 16.

23. Id.


26. Id.
The funds in trust received by the BTD were themselves insufficient to cover BTD's projects and created a funding gap of more than U.S. $30,000m each year. In 1995, the ITU's WorldTel set up an investment fund for joint telecommunication ventures in developing countries with a program to finance two or three pilot projects in the initial years worth about U.S. $40 to $50 million each, and to fund some U.S. $200 to $500 million worth of projects in LDCs. Similarly, the Radiocommunications Bureau was called upon for the review of current procedures relating to the coordination and planning of satellite devices, due to the recognition that more work was needed to study the technical sharing criteria for the LEOs and GEOs and terrestrial networks, as well as the need to better match notification of satellites with satellites actually launched. In response to the problem of accounting rates for LDCs, it was agreed at the 1994 Plenipotentiary Conference that the network quality and telephone penetrations to developed country levels would assist in diminishing existing call and cost imbalances. It was further decided that where bilateral agreements are reached on revenue sharing on a basis other than 50/50 to the advantage of developing countries, the resulting additional revenues should be used by developing countries to improve their networks and services.

B. INTELSAT.

In 1964, two years after passage of the U.S. Communications Satellite Act ("Satellite Act"), the United States and ten other nations entered into an interim executive agreement that created the International Telecommunications Satellite Organization ("Intelsat"). The parties to that Agreement, "desired...to continue the development of [a] telecommunications satellite system with the aim of achieving a single global commercial telecommunications satellite system as part of an improved global telecommunications network which will provide expanded telecommunications services to all areas of the world and which will contribute to world peace and understanding,..." The member-nations later executed two additional executive agreements formalizing the ground rules for Intelsat's control and management of the international satellite network and related support facilities. These agreements are known as the Definitive Agreement and the Operating Agreement (collectively, the "Intelsat Agreements"). The Definitive Agreement was executed by the government of each member-nation and estab-

29. Id.
30. Id. Shetty, supra note 27.
31. ITU Fund, supra note 25.
32. Id.
lished a three-tiered organizational structure for Intelsat, comprising the Assembly of Parties, the Meeting of Signatories, and the Board of Governors. Each member-nation or "party" has a seat on the Assembly of Parties, and each designated "signatory" to the Operating Agreement is represented in the Meeting of Signatories and the Board of Governors. The United States designated the State Department as its representative to the Assembly of Parties and Comsat Corporation ("Comsat") as its signatory and representative to the Meeting of Signatories.

Intelsat's importance to international telecommunication is due to its ownership and operation of the world's largest network of satellites, which provides international telecommunications services such as phone, telex, television broadcasting, and data transmissions, on a commercial "global and nondiscriminatory basis." The Intelsat Agreements give Intelsat virtually plenary authority to set rates for use of Intelsat satellite capacity, to approve Intelsat's purchases of goods and services, and to approve proposals to establish international and domestic telecommunications satellite systems separate from Intelsat.

Most important to Latin America's satellite telecommunication development is that under the Intelsat Agreements the member nations that authorize international satellite systems separate from Intelsat are required to ensure that such systems are technically compatible with the Intelsat system and will not cause significant economic harm to it. During 1990, Intelsat initiated certain reforms to its process for coordinating with these separate satellite systems, which were superseded in November 1992 and again in October

36. The function of the member-nations' parties to the Intelsat is to make recommendations to other affiliates of the organization as well as to conduct consultations for any member-nation wishing to establish (or use) non-Intelsat systems. See Paula Brillson, *The Empire Strikes Back in the International Satellite Telecommunications Industry*, 18 RUTGERS COMPUTER & TECH. L.J. 381, n.35, citing Intelsat Agreement, Aug. 20, 1971, art. XIV(d), 23 U.S.T. 3813, 3854. In the event that any member-nation wished to establish a separate international satellite system, procedures have been set forth to permit the creation of additional systems. *Id.* The procedures are commonly referred to as the article XIV(d) consultations. *Id.* New system proposals are assessed on the basis of technical compatibility with the Intelsat system and showing that the use of a separate system will not produce an adverse economic impact upon Intelsat. *Id.*

37. The powers and duties of the signatories are, in part, to participate in the actual ownership and commercial exploitation of Intelsat satellites, and to promote the policies and interests of its represented member country. *Id.* at n. 389. Apportionment of Intelsat shares is determined by the level of use of the Intelsat facilities. *Id.* at n. 40. Ownership has been dominated by the signatories of both the United States (Comsat) and Great Britain (British Telecom) since the formation of Intelsat. *Id.*

38. *Id.* at 382. A communications satellite system, like Intelsat, is similar to a sophisticated electronic mirror suspended in a stationary orbital position thousands of miles above the equator. *Id.* at n. 4 (citing Edward S. Binkowski, *SATELLITE INFORMATION SYSTEMS* 14 (1988)). Broadcasters are to transmit signals (uplinks) from the earth which are bounced off the satellite's mirrored-like surface (the transponders) and redirected to earth (downlinks) to a receiving station. *Id.*


40. *Alpha Lyracom*, 946 F.2d at 170.
1994. Under the streamlined procedures approved in 1992, carriage by separate systems of any amount of traffic or services not interconnected to the public-switched network and of up to 1,250 circuits of public-switched traffic per satellite is presumed not to cause significant economic harm to the Intelsat system. The 1,250 threshold was raised in 1994 to 8,000 circuits of public-switched traffic per satellite. In addition, in 1994 Intelsat approved further liberalization of coordination procedures with a view toward eliminating the economic harm test in the 1997-98 time frame.

Today, 137 governments are members of Intelsat through their designated representatives. The recent and increasing efforts for the privatization and restructuring of Intelsat, however, are likely to affect satellite telecommunication development in Latin America. Comsat, the U.S. signatory to Intelsat, reached an agreement with the U.S. Government in February, 1996 concerning a joint proposal that would transfer approximately 50% of Intelsat's assets, including satellites, to a new commercial affiliate. The proposal must be approved by two thirds of the 137 governments that are members of the Intelsat before it may be implemented, and should be considered for adoption at the next Intelsat Assembly of Parties in 1997.

C. COMSAT.

The United States Congress enacted the Communications Satellite Act of 1962 ("Satellite Act") to implement the national policy of establishing "in conjunction and in cooperation with other countries, as expeditiously as practicable, a commercial communications satellite system." Rather than relying solely on governmental efforts, Congress sought to "provide for the widest possible participation by enterprise," by creating the Communications Satellite Corporation, known today as COMSAT Corporation ("Comsat"), a publicly-held, private corporation to act subject to appropriate governmental regulation, as the "United States participant in the global system." Under the Satellite Act, Comsat assumed responsibility for planning, constructing, and operating the satellite system, including satellite terminal stations, "itself or in conjunction with for-
eign governments, and for leasing space satellite telecommunications channels to communications common carriers.\textsuperscript{52}

Until 1985, Comsat was, with minor exceptions, the sole United States provider of international satellite communications services using the Intelsat system. At that time, however, the FCC authorized the establishment of separate U.S. international communications satellite systems that would compete with Intelsat. There are various separate U.S. based international communications satellite systems (i.e. Orion, Panamsat and Columbia), INTERSPUTNIK, a Russian based international system and a number of regional and foreign satellite systems around the world currently competing with Comsat.

The importance of Comsat to satellite development in Latin America lies not only in the fact that Comsat has the largest investment share in Intelsat, but because it also has a wide range of investments in worldwide commercial operations which include several joint ventures and other operations in several Latin American countries. On a more recent front, a major part of Comsat’s international telecommunications strategy is the investment of approximately $150 Million in I-CO Global Communications (Holdings) Limited (“ICO”). ICO plans to build and operate spacecraft and related terrestrial facilities for the provision of worldwide mobile communications via handheld devices. ICO’s intermediate circular orbit satellite system will have 12 satellites and is scheduled to become operational by the year 2000. ICO users are expected to communicate worldwide using handheld units similar to cellular phones.

D. \textbf{ANDEAN SATELLITE SYSTEM.}

In 1991, the Andean Telecommunications Commission authorized the State Telecommunication Firms Association (ASETA) to reach a bridging agreement with Intelsat to provide satellite communications capability for Latin America into the 21st century.\textsuperscript{53} In December, 1992, the Intelsat Council of Governors approved the reservation of sufficient satellite capacity for the ASETA members to enter into a fifteen-year contract beginning in 1995.\textsuperscript{54} The proposed new range of Intelsat VII satellites to be used under its provisions. These spacecrafts are twice as powerful as the existing Intelsat systems and would meet both existing and anticipated public satellite communications service demands for the region and do it via smaller earth stations than are now in use.\textsuperscript{55}

\begin{itemize}
\item \textsuperscript{52} Id. § 735(a)(1).
\item \textsuperscript{53} See Stewart Wittering, Footprints to Overlap in South America; Establishment of Regional Telecommunications Networks, Int’l THOMSON PUB. LTD. 47 (U.K.) (1993), available in LEXIS, Nexis Library, ARCNWS File.
\item \textsuperscript{54} Id.
\item \textsuperscript{55} Id.
\end{itemize}
In addition, the Andean Commission for Telecommunication Tariffs ("CATT") has begun the process of tariff harmonization. Standardized tariffs for intra-regional telephone and telex traffic between the five CATT member states were introduced in 1991.\footnote{Id.} Standardization of data traffic is also under way in Peru, Colombia and Venezuela, which are already operating under a harmonized charge rate structure.\footnote{Id.}

E. \textbf{INMARSAT.}

The third major satellite communications force in the Latin American region is Inmarsat.\footnote{Id.} Inmarsat, however, concentrates on mobile services, and is therefore not in direct competition with either Intelsat or Panamsat.

Inmarsat is comprised of seventy-nine nations and is headquartered in London. Inmarsat operates under three agreements: (i) an intergovernmental convention; (ii) a headquarters agreement with the U.K. government; and (iii) an operation agreement signed by each nation's government or designated telecommunications entity (signatory).\footnote{See Comsat 10-K report, supra note 41, at 11.} Comsat is the U.S. signatory.

Inmarsat has been a presence in Latin America since 1982 with seven member states: Argentina, Brazil, Chile, Peru, Colombia, Panama and Cuba.\footnote{Id.} Venezuela, Costa Rica, and the Bahamas were aspirant members as of 1993.\footnote{Id.} Mexico became a member of Inmarsat in early 1994. Inmarsat provides services in 34 of the 46 countries in the region and has a single dedicated earth station in Tangua, Brazil.\footnote{Id.} Inmarsat provides access to PSTN services throughout the region via Comsat, IDB, and Teleglobe earth stations. In addition, Inmarsat may also expand its switched satellite services for small communities since it is already doing so, on a private basis, for the Galapagos Islands and due to system trailing appearing imminent in other countries.\footnote{Id.}

Intergovernmental proceedings under the procedures of Inmarsat are now underway to debate privatization of Inmarsat as well as other possible alternative structures favored by other member nations of the organization.\footnote{See Comsat 10-K Report, supra note 41, at 11.} The privatization efforts are based on some of the members belief, particularly Comsat's, that if Inmarsat is converted into a commercial enterprise responsible to shareholders and without the governance and cost structure associated with international treaty organizations, it will be able to be more competitive in the dynamic international telecommunications markets of tomorrow.\footnote{Id.}
The operations of Alpha Lyracom or Pan American Satellite, L.P. ("PanAmSat") as the company to market and operate the first international commercial communications satellite outside of Intelsat are significant to satellite telecommunication regulation and development in Latin America. The actions undertaken by PanAmSat to accomplish its current status can be a precedent not only to private parties interested in operating outside of Intelsat, but for the emerging local telecommunication provider with respect to expiration of the exclusivity period that the successors of privatized telecommunication operators now enjoy in some Latin American countries.

Beginning in 1983, several United States companies, including PanAmSat, lobbied the Federal Communications Commission for permission to establish non-Intelsat international telecommunications satellite systems. The U.S. Communications Satellite Act made only a passing reference to competing satellite systems, authorizing the President to explore the possibility of “a separate communications satellite system” where “required to meet unique governmental needs” or where “otherwise required in the national interest.” Article XIV(d) of Intelsat’s Definitive Agreement gave Intelsat’s governing bodies the authority to approve proposals establishing international and domestic telecommunications satellite systems separate from Intelsat. In particular, an applicant for a separate system providing international satellite service must engage in “consultations” with the Assembly of Parties and the Board of Governors to ensure the technical compatibility of its system with Intelsat and to guard against the possibility that the competing system might result in significant economic harm to Intelsat.

In 1984, President Reagan, acting pursuant to §§ 701(d) and 721(a) of the Satellite Act, issued Presidential Determination No. 85-2, declaring separate international communications satellite systems to be “in the national interest” and directing the Secretary of State and the Secretary of Commerce to “inform the FCC of criteria necessary to ensure [that] the United States” fulfills its obligation to consult with the appropriate Intelsat bodies regarding competing satellite systems.

The Departments of State and the Department of Commerce jointly procribed that each alternative system “be restricted to providing services through the sale or long-term lease of transponders or space segment capacity for communication not interconnected with public-switched message networks” and that “one or more foreign authorities [were] to authorize use of each system and enter into consultation procedures with the...
United States Party under Article XIV(d) of the Intelsat Definitive Agreement to ensure technical compatibility and to avoid significant economic harm" to Intelsat.

Following Article XIV(d) consultations, PanAmSat obtained approval from Intelsat's Assembly of Parties to provide international satellite services to the United Kingdom, Germany, Ireland, and several Central and South American Countries. PanAmSat also received favorable findings from the Board of Governors following Article XIV consultations for the provision of domestic satellite services to the United Kingdom and Chile.

PanAmSat's activities, however, were restricted to non-PSN networks. Therefore, PanAmSat was prohibited from carrying any traffic interconnected with the public-switched network (PSN). In 1990, PanAmSat challenged the non-PSN restriction by filing a Petition for Rulemaking with the FCC. It argued that "by protecting Intelsat's monopoly in the provision of international switched services via satellite, the U.S. government [was] protecting, not U.S. interests, but the interests of Intelsat's owners, the foreign communications monopolies that were overcharging U.S. telephone consumers by as much as $1 billion." Moreover, PanAmSat argued that by limiting the ability of these "nascent competitors" to expand their service offerings at lower prices, the PSN restriction runs counter to the stated U.S. policy of encouraging a pluralistic, competitive overseas environment, which would ideally open markets to United States exporters of telecommunications goods and services.

69. Id. at 172 (citing letter from Secretary of State George P. Schultz and Secretary of Commerce Malcolm Bladridge to Chairman Mark S. Fowler of the Federal Communications Commission (Nov. 28, 1984)). The Foreign Relations Authorization Act (FRAA), Fiscal Years 1986 and 1987, Pub. L. No. 99-93, 99 Stat. 405, 425-26 (1985), ratified the procedures set forth in the Definitive Agreement and in the subsequent Executive Branch directives on competing satellite systems. Id. Expanding on § 721(a) (6) of the Communications Satellite Act, the FRAA declared the policy of the United States to make available, in addition to satellite services utilizing Intelsat facilities, "any additional such facilities...found to be in the national interest" and that also met the dual requirements of technical feasibility and avoidance of economic harm set forth in Article XIV(d) of the Definitive Agreement. Id. (citing § 146(a)(2)). The FRAA also made compliance with the requirements set forth in Presidential Determination No. 85-2 and the requirement that "one or more foreign authorities have authorized the use of such system consistent with such conditions" a precondition of consultation with Intelsat. Id. (citing § 156(b)(1), (2)).

70. Id. at 172.

71. See Pan American Satellite, Petition for Rulemaking to Provide for Fully Competitive Services, Including Services Interconnected with the Public Switched Network, 328 PLI/Pat 611,628 (1990) [hereinafter PanAmSat Petition].

72. Id. Further, PanAmSat explained that...the PSN restriction also has placed obstacles in the path of the new, private telecommunications entrepreneurs outside of the U.S. in many countries, deregulation of telecommunication is advancing, and the PSN restriction has prevented the new entrepreneurs in these countries from using PanAmSat facilities to compete with the PTTs in offering international services. Id. at 699.

73. Id.
Thereafter, the State Department made a decision to relax the ban preventing private satellite companies from providing services that interconnect with the PSTNs by allocating 100 circuits for their use. While the concession was small, it was a step toward liberalizing the regulatory structure of the satellite industry. In late 1993, the FCC substantially eliminated prior restrictions on access of separate system satellite operators to the PSTN. This action, along with the FCC's goal of eliminating all restrictions on separate systems by 1997, will undoubtedly increase competition and support the development of additional separate systems throughout the world.

While PanAmSat was successful with regard to the PSN, it felt Comsat restricted its operations. This claim provides a useful example as to what a local provider in one of the Latin American countries is likely to face if it chooses, in the near future, to challenge the successor of the government telecommunication monopoly, which is in many instances the new local government representative in Intelsat, and is likely to play a role similar to Comsat's.

In 1989, PanAmSat filed an antitrust lawsuit against Comsat, amended in 1993 pursuant to the court's recommendation, alleging that Comsat violated antitrust laws in pursuing business activities outside its role as a signatory of Intelsat. In other words, by acting as a common carrier and not in its role as an international organization, Comsat violated anti-trust laws. The alleged violations included boycotting and refusing to enter into agreements with PanAmSat to provide international satellite services, conspiring to acquire and market transponders on competing satellites, thereby interfering with PanAmSat's business plans, procuring agreements from foreign companies to refuse to deal with PanAmSat or its customers, and conspiring to suppress international satellite data business by refusing to authorize customer earth stations for the sole purpose of preserving the telecommunication monopolies.

In 1994, PanAmSat amended the lawsuit to include GTE Corporation and fourteen European, Caribbean and Latin American telecommunications companies as defendants. PanAmSat alleged that these companies had conspired with Comsat to monopolize international telecommunications satellite services. Discovery in the lawsuit produced in excess of 330,000 pages of documents between the parties, and an additional 57,000 pages from nineteen third parties. Although discovery ended in 1994, PanAmSat filed motions for additional discovery. In December 1994, Comsat filed a motion for summary judgement seeking the court to dismiss all claims. On September 4,

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74. Brillson, supra note 36, at 390, n.46.
75. Id. at 390, n.46 (citing 52 Companies back PanAmSat's request for PSTN Interconnection, Fin. Times Ltd., Feb. 21, 1991, available in LEXIS, Nexis Library, FTTEL File.
76. Alpha Lyracom, 946 F.2d at 170.
78. Id. The suit named as new defendants telecommunication companies from Germany, the United Kingdom, France, Spain, the Dominican Republic, Brazil, Chile, Colombia, Venezuela, Guatemala, Jamaica, Barbados and Trinidad and Tobago. Id.
79. Id.
1996, PanAmSat's discovery motions were denied and Comsat's motion for summary judgement was granted as to all claims.81

Today, PanAmSat has four operational satellites, two of which service Latin America, two under construction, and two more on order. Beyond the PAS-8, PanAmSat has requested FCC approval to launch several additional satellites, including two Pan-American services and several that will use emerging transmissions frequencies for commercial services.82 PanAmSat's first satellite, the PAS-1, was launched in 1988 for service over the Atlantic Ocean region and is now the leading satellite for television and cable programming distribution in Latin America.83 The PAS-3 satellite (a replacement for a satellite lost as a result of a launch failure in December 1994) was launched on January 12, 1996 and commenced service on February 19, 1996 over the Atlantic Ocean Region.84 In addition, PanAmSat is heavily involved in direct-to-home ("DTH") television services and is the primary satellite service provider for the Latin America DTH effort led by the world's top producers of Spanish-language, Portuguese-language, and other international programming.85

On September 20, 1996 PanAmSat and Hughes Electronics Corporation announced an agreement to merge their respective satellite services operations into a new publicly held company to be named PanAmSat Corporation.86 The deal was valued at $3 billion and created a dominant force in the satellite industry, second only to Intelsat.87 The new company will combine HCG's fleet of ten communication satellites for the U.S. market with PanAmSat's international fleet of four. The strategic combination creates a prime service provider of satellite based communication services and will undoubtedly reshape the satellite telecommunication service industry in Latin America.

81. Id. On a similar trend, Comsat Corp. announced in March, 1996 that it had filed suit against News Corp Ltd. (NWS), PanAmSat Corp. and Grupo Televisa S.A., over NWS's alleged breach of a contract to lease capacity on a Comsat satellite. Comsat alleged that PanAmSat and Grupo Televisa "induced" NWS to violate the contract, and "conspired to benefit themselves by arranging for PanAmSat to provide the service in Comsat's place." See Sued by Comsat Corp., S&P DAILY NEWS, March 15, 1996, available in WESTLAW.
83. Id.
84. Id.
85. Id.
87. Hughes Buys PanAmSat for $3B, AP ONLINE, Sept. 20, 1996. The Hughes Communications Galaxy (HCG) business of Hughes Electronics was to be combined with PanAmSat to form PanAmSat Corporation. Id. In connection with the transaction, PanAmSat stockholders would receive an aggregate $1.5 billion in cash and 28.5 percent of the new company. Id. In addition, Grupo Televisa S.A., a PanAmSat shareholder, would repurchase PanAmSat's options to obtain equity interests in the DTH ventures in the Americas and the Iberian Peninsula. Id. Immediately after the merger, Hughes will own 71.5% of the new PanAmSat. The transaction requires government review and receipt of other approvals, including that of the FCC, which are expected to be completed within six to twelve months. Id.
G. NAFTA AND OTHER REGIONAL AGREEMENTS.

An important area affecting telecommunications is the potential effect of bilateral and multilateral agreements. These agreements may afford telecommunication providers increased access to the Latin American market and privileges not granted to nonparties to those agreements.

For example, the Andean Common Market ("ACM") is committed to promoting the importation of technology to its member countries by facilitating license contracts for technology, technical assistance, technical services, basic engineering and other technological contracts as defined in the legislation of each country.\(^8\) Similarly, the Latin American Association for Integration ("ALADI") created an economic preference area, whereby tariff reductions were negotiated by the participating parties.\(^9\) ALADI has allowed for the convergence of Latin American countries which have certain mutual interests and a certain degree of economic capability, such as Brazil and Argentina.\(^9\) Uruguay and Paraguay joined the free trade process in 1991 by signing the Treaty of Mercosur.

The United States supports the Mercosur process, which provides access to a $420 billion market and aims at total tariff removal, and agreed to negotiate a free trade area with the group as a bloc once the integration process is completed.\(^9\) Mexico is negotiating its adhesion to NAFTA within the ALADI, since according to article 44 of the Treaty of Montevideo\(^9\) any preferential tariff treatment granted to a third country (non-member state) shall be automatically extended to ALADI member states.\(^9\)

In addition, the North America Free Trade Agreement ("NAFTA") is of special importance to telecommunication development in Latin America. Chapter 13 of NAFTA

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88. See Decision 291, Andean Common Market, 5 I.L.M. 150-156 (1992). The Andean Common Market has as its principal goal "the growing convergence between the economic policies of its member countries in the search for greater efficiency and competitive position through liberalization of trade and international investment, in line with the interest of [its] countries and the implementation of economic rationalization based on private initiative, fiscal discipline and a new and efficient structure in the State." Id. at 154, Chapter IV, Art. 12.
90. Id.
91. Id. at 481.
92. Id. The Treaty of Montevideo emerged in 1960 to establish the Latin American Association for Free Trade (ALALC), which was to create a free trade zone within the territory of its member states, namely: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela. Id. However, this organization had little success, primarily because of the different economic, political and social levels of its members. Id. The signing of the Treaty of Montevideo in 1980 changed the integration process, setting forth more realistic terms and conditions, new flexible instruments and mechanisms, thereby creating ALADI. Id.
93. Id.
is devoted to trade and investment in telecommunication equipment and services. Chapter 13 provides, *inter alia*, equal access to and use of any public transportation network or service offered in a signatory’s territory, nondiscriminatory licensing and permit procedures for value-added or enhanced services (e.g., data and facsimile networks), nondiscriminatory assessment and testing procedures for regulating the telecommunications industry, and harmonization and liberalization of standards-setting procedures for regulating the telecommunications industry.

NAFTA will eliminate trade barriers and foreign investment restrictions in many high growth areas of the telecommunications market including software development and enhanced or value-added services. It also offers greater intellectual property rights protection for telecommunication companies expanding into the Mexican market. The growth of the Mexican economy and the increase in the Mexican telecommunications capacity as a result of NAFTA consequently will provide substantial market opportunities for United States firms in Mexico. For instance, the launching of the Solidaridad II satellite will help companies providing paging, trunking, and cellular services to cover the entire country. Also, private companies in Mexico may use the satellite system to create/expand their private networks. These areas are already providing a substantial market for U.S. products and services. As other countries in Latin America develop their participation and access into NAFTA, these market opportunities will extend to those growing economies.

NAFTA’s advantages to telecommunication development are in the areas of reduction and phasing out of tariffs, access to a larger market, access to specialized services and industry experts, as well as facilitated mobility of key personnel across national borders. Further advantages in satellite telecommunication development can be expected from additional bilateral and regional agreements throughout the Latin American countries. For instance, Mexico grants preferential import duties for telecommunication switching equipment to ALADI members. In addition to the United States and Canada, Mexico also has free trade agreements with Chile, Colombia, Venezuela, Costa Rica, and Bolivia.

95. *Id.* at 23-24.
96. *Id.* at 24.
97. *Id.*
98. *Id.* Foreign telecommunications companies entering strategic alliances with U.S. firms will also benefit from the NAFTA, since under NAFTA, North American firms will be allowed to lease private lines, attach terminal or other equipment to public networks, interconnect private circuits to public networks and use operating protocols of the user’s choice on a nondiscriminatory basis. *Id.* Further, foreign telecommunications companies will be able to take advantage of enhanced trade under NAFTA because favorable treatment under NAFTA is not confined to the parties. *Id.*
101. *Id.*
The Andean Common Market, ALADI, Mercosur and NAFTA suggest that Latin American integration is no longer mere rhetoric, but represents real change which can lead to positive and concrete results in the development of a strong telecommunication policy for the region.

III. Major Issues Affecting Satellite Telecommunication in Latin America.

Priority issues that industrialized countries should first consider on the agenda for the development of satellite telecommunication in Latin America, such as privatization, competition and deregulation, are not necessarily the most relevant to accomplish such need. Privatization is only one of several methods of achieving the objectives of operational efficiency and capital attraction for developing countries. Investment capital is needed not to promote a competitive system, but to promote the development of the telecommunication network infrastructure. Deregulation is not needed in most developing countries since they have never had a strict regulatory oversight of their telecommunication systems. Rather, a priority need is the careful drafting of explicit telecommunication policies to guide the development of the telecommunication system.

Therefore, a number of essential issues to the telecommunication needs of Latin American countries require special analysis. Concerns over the appropriate structure and tasks of a regulatory authority, the appropriate role for competitive and collaborative forces within an overall regulatory framework, methods for developing useful cost analysis, the design of tariff structures, the analysis of division of revenue principles and options, and the applicability of experiences in developed countries to developing countries illustrate just a few important issues. A brief overview of some of these major issues follows.

A. National Policy and Regulatory Process.

The Latin American telecommunication sector as a whole is in a nascent state. In each country, the industry is in a different developmental stage under a separate regulatory scheme. More interesting, however, is that the experiences of each country can be seen as part of a complete life cycle which could be regulated under a core regulatory scheme.

For example, Brazil is undergoing Phase 1, which is characterized by a government run telecommunications company with tremendous unrealized potential. The

102. Id. at 20.
103. Id.
104. Id.
105. Id. at 19.
106. See Flores, supra note 100.
upside of this stage comes into play as the government cleans up the economy for privatization. Peru is undergoing Phase 2, which lasts for the first three or four years after privatization, characterized by terrific growth in revenue and cash flow driven by tremendous line growth and productivity improvement. Argentina is undergoing Phase 3, achieved when the explosive growth settles into good growth. Mexico is undergoing Phase 4, when the monopoly expires and long distance revenues get hit hard. This stage should be characterized by declining prices and higher marketing expenses and by the decrease of margins and overall profitability. Chile is undergoing Phase 5, which occurs 12 to 24 months after the introduction of competition. At this stage, the sector regains its balance as the key industry players adopt rules for rational, oligolistic competition.

The core regulatory regime for telecommunication policy objectives in Latin America should be based on establishing targets for telecommunication development, which in turn should measure progress toward achievement of economic, social and industrial goals, such as the number and percentage of the population with access to the telecommunication network, growth in system capacity, and the availability of different kinds of services, including satellite telecommunication.

The regulatory authorities in the region should establish operational guidelines and reporting standards to monitor system expansion and to consider the interests of different user groups, develop strategies to examine problems, and propose changes to policy objectives when appropriate. In addition, national telecommunication policies in Latin America need to attempt to achieve multiple objectives, at both the economic and social levels. Moreover, an effective policy and regulatory process in the area of telecommunications as a whole is essential to satellite telecommunication development which in turn will further develop and strengthen Latin America.

B. Human Resource Development/Operational Deficiency.

Policies and institutional arrangements need to be established to nurture the human resources of Latin American countries. This task involves much more than manpower training programs since it requires attention to the structure of career and pay incentives, bureaucratic constraints, and ongoing training and education opportunities among other factors. Limited skills in developing countries are also a negative factor.
in the creation of efficient telecommunication entities. Moreover, telecommunication operating entities must be part of a competitive and effective labor market, which, in the case of Latin America, is still undergoing major changes. There are shortages of skills at all levels, including technical, operational, and managerial which frustrate the performance of most aspects of telecommunication system improvement and expansion. Further, a failure to employ sound business practices, bureaucratic inertia and undue political intervention in day-to-day management has often compromised efficiency and dampened the interest of outside suppliers of human and capital support.

Human resource development and operational deficiency is already being reduced in Latin American countries due to the growth of foreign investment, the increasing interest in the area as an emerging new market, the importance given to the area by international organizations, and by the region's access to information technology.

Nevertheless, Latin American countries need assistance and training support from the industrialized countries that possess them. For example, the U.S. Telecommunications Training Institute, formed as a result of the 1982 ITU's Nairobi Plenipotentiary, offers courses on mobile communications in Spanish and English in wireless communications and spectrum management and on telecommunications planning and economic decision-making. Institutions such as the Telecommunications Development Bureau and the WorldTel are the reasonable route under which to channel this type of support.

C. INVESTMENT CAPITAL.

Improvement of the operational deficiency problem in Latin America is attracting capital to telecommunication system expansion. Newly-enacted foreign investment policies and regulations are also responsible for this trend. In addition, more Latin American governments have opted for policies that push for industry liberalization and deregulation. Direct foreign investment, the most salient of which has been through privatization, revitalized the public network market, most notably through private concessions and value-added services.

Latin America is unique not only in the actual number of privatizations, but in the scope of these transactions. Generally, governments have sold their majority stake to mix-investor consortia (groups containing both foreign and local strategic investors), and the state required these new owners to meet certain performance requirements within a specified period of time (i.e., increase the number of telephone lines and/or public phones in the country). In return, Latin American governments have reduced public debt and generated new investment, while telecommunication companies have expanded

120. ITU Policy, supra note 4, at 23.
121. Id. at 25.
123. Id., Examples of these include technology such as data-bases, E-mail.
124. Id.
networks, reduced tariffs and, in general, increased the overall quality and efficiency of telephone service.\textsuperscript{125} Moreover, with the privatization of their telephone systems, Latin American governments are following a trend to take profits on this valuable asset and turn telecommunications over to private hands. Further, there are now a number of specialized regulatory agencies to watch oversee specific areas. For example, in Peru, the telecommunications regulator OSIPTEL, in operation since 1993, is now playing a key role in determining the conditions under which trade barriers will affect the telephone industry in 1998.\textsuperscript{126}

In addition, several measures now provide investment security to foreign investors which has encouraged capital investment in Latin America. Many Latin American countries have joined the Multilateral Investment Guarantee Agency, a World Bank Agency, with the purpose of encouraging and protecting investment in those member countries. They have also entered into bilateral agreements for the protection of investments and executed the Convention on the Settlement of Investment Disputes between States and National of Other States. OPIC is also playing a role in the security of investments in the region.

Further, some Latin American countries offer legal guarantees to foreign and local investors in terms of a stable tax and foreign currency regime and equal treatment whereby the national legal system will not discriminate against investors based on their national or foreign participation. In Peru, these guarantees have taken the form of Stability Agreements, which are contracts entered into by the government and the investor for a ten or twenty year term.

Another factor influencing capital attraction is foreign exchange availability and the risk of changes in currency valuations in international currency markets.\textsuperscript{127} In the past, many developing countries have been unduly dependent upon foreign exchange for capital and equipment purchases.\textsuperscript{128} More favorable options for obtaining capital from national and international private and public sources and for establishing more carefully structured financial arrangements with foreign investors and equipment suppliers are now becoming possible.\textsuperscript{129} Examples of this trend are financing through public offerings usually with two simultaneous trenches, one at the local market and the other international. ADRs, ADSs, Eurobonds, 144A placements and other forms are becoming better known and more frequently used to raise capital throughout Latin America.

Another source of capital for telecommunication development is by way of international telecommunication organizations. For example, the ITU has created a private investment entity for telecommunications infrastructure expansion in LDCs through WorldTel. The project was sponsored by thirty private and public telecom operators and is different from other funding and development organizations in that it will be sector-
specific, focusing only on telecommunications and information technology. From the investor's side, client countries will be required to provide guarantees, risk management mechanisms and adequate financial structures to safeguard any investments. WorldTel will be driven by private funding with equity limited to private financial investors. Governments, telecommunication operators and vendors can take part in projects through debt and/or equity participation at the project level.

D. \textbf{Equitable Access to the Geostationary Orbit.}

The exploitation of outer space is perceived to promise unprecedented economic benefits to the impoverished countries of the Third World. Thus, one of the most important aspects of telecommunication development for the developing countries is equitable access to the geostationary orbit (GSO) and the space services utilizing it. All commercial telecommunications satellites in operation today are geostationary, meaning they occupy a position in a circular orbit 36,000 kilometers from the earth in the plane of the earth's equator. In this orbit, a satellite appears stationary vis-à-vis the earth since its period of revolution is equal to the period of the earth's rotation.

However, since the developing countries attempted to become active players in the formulation and development of international law to regulate outer space activities, their efforts to establish an international regulatory regime for equitable sharing of radio frequencies and orbital positions has been vigorously confronted by the developed countries.

In this context, the objective of the 1988 Space World Administrative Radio Conference (WARC), attended by over 100 nations and by all of the international organizations with an interest in satellite telecommunication, was to guarantee equitable access by all countries to the GSO and radio frequency spectrum. The developing countries wanted to divide the orbit-spectrum resource so that every country in the world would

\begin{itemize}
  \item See Jakhu, \textit{supra} note 8.
  \item \textit{Id.} (citing The International Telecommunications Union (Radio Regulations) Final Acts, World Administrative Radio Conference, Geneva (1979) at art. I. (defining a geostationary satellite as "[a] geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth." \textit{Id.} A geosynchronous satellite is defined as "[a]n Earth satellite whose period of revolution is equal to the period of rotation of the Earth about its axis") \textit{Id.} (emphasis in original).
  \item See ITU Policy \textit{supra} note 4.
\end{itemize}
get a position in the GSO and associated radio frequencies regardless of need for those resources or current ability to use them.\textsuperscript{135} This was to guarantee their future access to the orbit, since the developing countries were concerned that increasingly intensive use of the orbit-spectrum resources had been made by developed countries through the late-1960s to mid-1970s.\textsuperscript{136} The developed countries, on the other hand, considered that the current regime, which was often referred to as “first come, first served” had operated quite satisfactorily since it had allowed access to everyone who asked to be accommodated, and no nation had ever been denied access to the GSO.\textsuperscript{137}

WARC was successful in defining an allotment plan for the GSO. Nevertheless, careful scrutiny of the Final Acts of WARC show that the achievements of the conference were far short of what the developing countries originally desired.\textsuperscript{138} The limitations imposed by the WARC as to fixed satellite services, nominal positions in a predetermined arc of the orbit, in addition to problems between the national allotments and the existing systems, showed that the practice of “first come, first served” still governed space telecommunications, and the late-comers were still at the mercy of the first-comers to allow them to put up their satellite systems.\textsuperscript{139} In other words, the late-comers were still at the mercy of the individual states for gaining access to this international resource.\textsuperscript{140} Moreover, at the ITU’s 1994 Plenipotentiary conference, LDCs were still strong on ensuring equitable access to the radiofrequency spectrum and the geostationary satellite orbit, as well as the efficient establishment and development of satellite networks.\textsuperscript{141}

As a result of WARC, developing countries started concentrating on subregional systems, realizing that for most of the developing countries their first satellite systems would be operating for a region, as opposed to one nation.\textsuperscript{142}

IV. Conclusion.

In order for satellite telecommunication in Latin America to achieve an efficient, pluralistic and competitive environment, a transformation similar to that which began in

\textsuperscript{135} The objective of the allotment plan was to guarantee equitable access for developing countries in the expansion bands, with a period of validity of 20 years or until revised. \textit{Id.} One part of the plan was the national allotments, where every country in the world did get a position in the GSO for use of the expansion bands. \textit{Id.} The other part of the plan was a network of existing systems, which were the systems that some developed countries counted on; they were not operative then, but advance publication within the ITU had been initiated for such systems. \textit{Id.}

\textsuperscript{136} \textit{Id.}

\textsuperscript{137} \textit{Id.} Until 1985, equitable access was guaranteed by planning the Fixed Satellite Service (FSS), which is the standard telecommunications satellite service, or point to point service. \textit{Id.} In 1985, 90\% of the communication satellites operated in the FSS, so this proposal was not a problem. \textit{Id.}

\textsuperscript{138} See Jakhu, supra note 8.

\textsuperscript{139} \textit{Id.}

\textsuperscript{140} \textit{Id.}

\textsuperscript{141} See Australian Initiative to Improve ITU's Satellite Coordination Procedures, IAC (SM) PROMPT, Oct. 28, 1994.

\textsuperscript{142} \textit{Id.}
the United States in 1985 must take place. Latin America needs to eliminate government monopolies of their telecommunication systems and encourage private participation within their regulatory framework. This is where the role of the international players influencing telecommunications in this region is perhaps most useful.

Organizations such as the World Bank, GATT, the OECD, and especially the ITU's BTD and WorldTel can assist Latin American countries in dealing with a local bureaucracy which is not yet prepared to address the broader telecommunication issues affecting the region. These organizations can play an important role in assisting government entities and private entrepreneurs to overcome some of the major issues affecting telecommunication development in Latin America such as the lack of national policy and regulatory framework that could promote technology intensive projects, the difficulties of achieving operational efficiency given the limited human resource development, and, more importantly, the availability of investment capital for such an undertaking.

Also significant to the region are the roles of Intelsat, Inmarsat and Comsat, especially now that current efforts to privatize Intelsat and Inmarsat threaten to reshape the almost stable satellite telecommunication balance. Although there is a valid argument that increased participation of nongovernmental representatives can no longer represent the interests of a particular country, but instead represent the interests of a commercial entity as a result of privatization efforts in developing countries, Latin American countries should also be wary of the long term effects of such privatized structures. The transformation of Intelsat and Inmarsat into commercial corporations would promote efficient products and services because "direct exposure for competitive forces lowers costs, improves quality, streamlines management and fosters innovation."\textsuperscript{143} However, it would also affect the operations of the new PanAmSat, which is now the largest private international satellite provider as a result of its recent merger with Hughes.

Such changes would reform government regulations that currently shape or misshape the international satellite industry. Nevertheless, these changes appear to be positive since existing regulations are primarily derived from a treaty-based system which has provided unfair advantages for organizations such as Intelsat and Inmarsat, and not enough guidelines for operators such as PanAmSat, thereby distorting, rather than promoting, international competition.

Additionally, the existence of regional agreements such as NAFTA and MERCOSUR, organizations such as ASETA and the CATT appear to promise an independent future for Latin America. Latin American satellite communication services are undergoing a period of considerable growth, which will greatly affect the emergence and development of regional networks.\textsuperscript{144}

In the meantime, the countries of Latin America need to become part of restructuring the international satellite telecommunication system, since they can no longer be considered an outsider to this development.

\textsuperscript{143} Id.
\textsuperscript{144} See Wittering, supra note 53.