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The Mexican Telecommunications Market:

The Interplay of Internal Reform and NAFTA

By Stephen I. Glover and JoEllen Lotvedt

1. Introduction.

More than 92 million people live in Mexico, providing a large client base for basic and advanced telecommunications equipment and services. Although large, this client base is significantly underdeveloped. Less than two years ago, Mexico's telephone network covered only 30% of Mexican homes. Access to telephone service has improved, but there are only 9.3 phones for every 100 persons and some communities in rural Mexico share one phone among 1,000 or more people. Because of this underdevelopment, the prospects for foreign telecommunications firms are immense.

Mexico, like other Latin American countries, has recently undertaken extensive internal reform, including liberalization of foreign investment restrictions and deregulation of various industries. In particular, Mexico has taken significant steps to reform the telecommunications sector. In 1990, the Mexican government began privatization of its

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3. Fainaru, supra note 2.

4. Id.; David Newman, Mexico Opens Up: Deregulation Brings Free Trade to Telecom, 24 DATA COMMUNICATIONS 96 (June 1995); Telephone Service Liberalization, supra note 2.

5. Many segments of the Mexican telecommunications industry are poised for growth, including the cellular and wireless communications equipment sector, the paging and trunked radio services sector, the satellite communications market, the cable TV sector and the market for basic services, including local and long-distance services. A GUIDE TO TELECOMMUNICATIONS MARKETS IN LATIN AMERICA AND THE CARIBBEAN 1-2 (1996) [hereinafter A GUIDE TO TELECOMMUNICATIONS MARKETS].
national telephone company, Telefonos de Mexico ("Telmex"). Mexico subsequently relaxed the rules governing foreign investment in telecommunications services and restructured the telecommunications regulatory entities. In June, 1995, the Mexican legislature also approved a statute which established the groundwork for the introduction of competition in the Mexican telecommunications market beginning in August 1996. At approximately the same time it undertook internal reform, Mexico entered into the North American Free Trade Agreement ("NAFTA") with Canada and the United States. NAFTA provides a comprehensive set of rules liberalizing trade among the member countries. Some of these rules focus specifically on the telecommunications industry and are designed to provide essentially free entry into Mexico for telecommunications products and services.

Ongoing internal reform and the implementation of NAFTA have led to a rapid transformation of the Mexican telecommunications industry. Many U.S. companies have made significant investments in response to this transformation. In 1995, the Mexican telecommunications market was the U.S.'s largest market in Latin America and its fourth largest international market. In the international market, telecommunications exports to Mexico constituted nearly 20% of total U.S. telecommunications exports to the world.

Despite these reforms, U.S. firms exporting telecommunications equipment to Mexico continue to encounter obstacles. Exports of terminal attachment equipment have been delayed because Mexico applies burdensome standards to this equipment prior to entry. In addition, U.S. exports have been adversely affected because Mexico has failed to adopt procedures for the mutual acceptance of test data relating to telecommunications product safety standards. Indeed, the U.S. Trade Representative (the "USTR") recently determined that Mexico is not in compliance with certain NAFTA telecommunications obligations and announced that it would initiate NAFTA dispute settlement procedures if these issues were not resolved promptly.

This paper focuses on the development of the Mexican telecommunications market and the role NAFTA has played in this process. Part II traces the changes in the telecommunications regulatory environment, beginning with the privatization of Telmex to the present. Part III describes the U.S. and Mexican alliances formed to compete with the former Telmex monopoly. Part IV discusses NAFTA's telecommunications provisions and the effect these provisions have on trade. It also discusses the compliance issues that have arisen under NAFTA and suggests that the current Mexican standards-related measures concerning telecommunications equipment do not comply with NAFTA obligations.

7. A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5, at 25.
8. Id. at 1.
9. Id. at 20.
10. Id.
II. Telecommunications in Mexico.

The year 1989 marked the beginning of the liberalization of Mexico's telecommunications market. At that time, Mexico's Secretariat for Communications and Transport (the "SCT")\(^{12}\) initiated market changes designed to open up Mexico's long-distance telephone market. These initiatives included the privatization of the state telephone company, Telmex. Prior to the privatization, the Mexican government owned a 55% majority interest in Telmex.\(^{13}\) In December 1990, the Mexican government sold all of its fully voting shares in Telmex to a private consortium for US$1.76 billion.\(^{14}\) These shares represented 20.4% of Telmex's capital stock and 51% of its full voting rights.\(^{15}\) After this sale, the government retained a 34.6% stake in Telmex in the form of limited voting shares.\(^{16}\) Of this, 4.4% was reserved for Telmex employees, 5.1% was set aside for consortium options to purchase and the remainder was put up for sale.\(^{17}\) From 1991 to 1994, the Mexican government gradually reduced its holdings through various offerings on domestic and international financial markets.\(^{18}\) Telmex was completely privatized in May, 1994.\(^{19}\) The private consortium, composed of Grupo Carso (a Mexican manufacturing and mining concern), SBC Communications (formerly Southwestern Bell) and France Telecom,\(^{20}\) currently controls Telmex through its majority voting power.\(^{21}\)

As one of the conditions to privatization, the Mexican government awarded Telmex a six-year monopoly concession to provide basic telecommunications services, consisting of local long-distance, international telephone and data transmission services. This monopoly concession officially ended August 10, 1996.\(^{22}\)

The deregulation of Telmex is similar in some respects to the breakup of AT&T. But this analogy fails to capture the true nature of the bureaucratic, monopolistic giant that Telmex had become in the forty-eight years of its existence. Telmex has an extremely

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12. The SCT is the national regulatory body responsible for setting telecommunications policy in Mexico. The SCT has three Deputy Secretariats: Infrastructure, Transport and Communications/Technological Development. A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5, at 9.
13. Mexico Coy on Telmex Date But Banks See May Sale, REUTERS FINANCIAL SERVICE, Apr. 8, 1991 [hereinafter Mexico Coy on Telmex Date].
14. See A GUIDE TO TELECOMMUNICATIONS MARKETS, Supra note 5, at 18.
15. Id. Only 40% of all Telmex shares issued carry full voting rights. See also Mexico Coy on Telmex Date, supra note 13.
16. Mexico Coy on Telmex Date, supra note 13.
18. A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5, at 18. Telefonos de Mexico Secondary Offering, supra note 17.
20. Javier Flores, Telecommunications, 5 No. 5 MEX. TRADE & L. REP. 19 (May 1995); A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5, at 18.
21. Mexico Finalises Competition Plans, supra note 19.
22. A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5, at 19.
poor reputation among its customers. Not only is long-distance service expensive, it is also notoriously inadequate and unreliable. Mexico currently has about ten local telephone lines for every 100 people, less than 20% of the U.S. ratio. Installation charges for phone service in Mexico are currently $240 for residences and $415 for businesses (seven times more expensive than installation in the U.S.). Long waits for new phone lines are common. In some cases, Telmex's customers wait up to two years to receive a new line.

Telmex also scores low when service "uptime" is measured. In comparing leased-line uptime, the U.S. averages more than 99.9%, while the availability of lines leased from Telmex often averages one to three percentage points less than the U.S. Even these small percentages can significantly affect a company's ability to service its customers. In response to such problems, cellular communications services have experienced tremendous growth - the wireless networks allow users to "leap frog" existing poor infrastructure.

Most attribute Mexico's poor telecommunications services to the entrenched Telmex monopoly and the lack of competition in the Mexican telecommunications market. The Mexican government's extensive efforts to liberalize the foreign investment environment and deregulate the telecommunications markets reflect its recognition that the market is significantly underdeveloped - a large infusion of money, capital and technology flowing from foreign investment will help remedy this situation, thereby greatly benefiting Mexican consumers.

As part of its internal reform efforts, Mexico enacted various laws, promulgated regulations and established regulatory entities to facilitate the liberalization of Mexico's telecommunications sector. The most significant of these laws is the Mexican Law on Telecommunications enacted in June, 1995. One of the goals of this law was to introduce competition in both local and long-distance services by establishing rules for com-

23. Enrique Rangel, Phone Firms Reach Out to Mexico, THE TIMES-PICAYUNE, Aug. 18, 1996, at A36 ("Mexico is ramping up its phone service, so antiquated that complaints about it are as common as talk about the weather.")

24. Barry Geldzahler, Get a Good Partner; Mexican Telecommunications Market, 230 TELEPHONY 92 (June 24, 1996).


27. Geldzahler, supra note 24.


29. Id.

petition in the use, development and exploitation of the public and private telecommunications networks,\textsuperscript{31} the radio spectrum and satellite communications.\textsuperscript{32} The new law also updated Mexican regulations with regard to technological advances\textsuperscript{33} and the changes required by NAFTA.\textsuperscript{34} In addition, it provided explicit ground rules for granting concessions to parties interested in competing in the newly deregulated telecommunications markets.\textsuperscript{35}

In addition to introducing a new telecommunications law, the Mexican government charged certain administrative agencies with specific oversight and regulatory responsibilities to facilitate the telecommunications deregulatory process. It gave the Mexican SCT, which is responsible for setting telecommunications policy,\textsuperscript{36} the authority to issue licenses and permits for telecommunications services in Mexico in accordance with the new law.\textsuperscript{37} In August, 1996, the Mexican government also created the Comision Federal De Telecomunicaciones (the "COFETE").\textsuperscript{38} This agency, which is an autonomous agency within the SCT and operates like the U.S. Federal Communications Commission, is charged with the authority to regulate the telecommunications industry.\textsuperscript{39} It is administered by the Communications and Transport Ministry, one of the three Deputy

\begin{enumerate}
\item A public telecommunications network is a "telecommunication network used to provide commercial telecommunication services. The telecommunications network does not include user telecommunication terminal equipment nor telecommunication networks beyond the point of terminal connection." \textit{Id.} at art. 3X. A private telecommunications network is "a telecommunications network designed to satisfy the specific telecommunication service needs of certain individuals which do not involve the commercial exploitation of said network's services or capacity." \textit{Id.} at art. 31X.
\item \textit{Id.} at art. 1.
\item Prior to this new law, telecommunications were regulated under the Communications Law enacted on February 19, 1940 and the regulations promulgated on October 19, 1990. Arturo Dessommes, \textit{Cellular Telecommunications Equipment}, \textit{INDUSTRY SECTOR ANALYSIS} (Sept. 27, 1996).
\item \textit{Id.}
\item \textit{Id.} Through the Mexican telecommunications law and applicable regulations, Mexico hopes to encourage competition, improve the quality and efficiency of local and long-distance services in Mexico and provide a centralized process to open the telecommunications sector in this area. \textit{Telephone Service Liberalization, supra} note 2. In June 1996, the SCT published three new regulations updating the Mexican Law on Telecommunications: (1) the \textit{Fundamental Technical Plan for Numeration}; (2) the \textit{Fundamental Technical Plan for Signals}, and (3) the \textit{Rules for Long Distance Service}, which provides a procedure for public network licensees to begin providing long-distance service on August 11, 1996. \textit{U.S. TRADE AND DEVELOPMENT AGENCY TELECOMMUNICATIONS SECTOR OVERVIEW, INFRASTRUCTURE OPPORTUNITIES IN MEXICO: GETTING GOOD PROJECTS ON TRACK} (1996).
\item A \textit{GUIDE TO TELECOMMUNICATIONS MARKETS, supra} note 5, at 9.
\item \textit{Id.} at 10; \textit{Telephone Service Liberalization, supra} note 2.
\item \textit{Communication: New Phone Commission Created}, \textit{6 MEXICO BUSINESS MONTHLY} (Sept. 1, 1996).
\item \textit{Federal Telecommunications Law, supra} note 6.
\end{enumerate}
Secretariats under the SCT. \textsuperscript{40} COFETE is responsible for the oversight of Mexico's newly deregulated telephone, paging, cable television and wireless phone industries. \textsuperscript{41}

Mexico's telecommunications law imposes some restrictions on foreign ownership. Activities involving ownership of a public telecommunications network (a "public network"), other than cellular telephone service networks, require a license which limits foreign ownership to 49%. \textsuperscript{42} Foreign ownership in cellular telephone services may exceed 49% only with prior authorization by Mexico's National Foreign Investment Commission. \textsuperscript{43} In addition, licenses required under the telecommunications law may only be granted to Mexican individuals or Mexican-owned corporations. \textsuperscript{44}

The Mexican telecommunications law outlines the necessary requirements to obtain a license to install, operate or exploit a public network in Mexico. The application to obtain a license must contain the name and address of the applicant, the nature of the services it wishes to provide, a formal business plan, including its expected investment and its financial, technical, legal and administrative capabilities. \textsuperscript{45} The SCT has 120 days to consider the application and may request additional materials from the interested party. \textsuperscript{46} Licenses for telecommunications networks will be granted for a period up to 30 years and may be renewed for terms equal to the original term. \textsuperscript{47} The law does not limit the number of licenses which the SCT may grant nor does it indicate the cost of such a license.

The statute specifically exempts private telecommunication networks (a "private network") from license, permit or registration requirements, unless they utilize a frequency band. \textsuperscript{48} A private network which markets its services to third parties is considered a public network and must apply for a license to operate. \textsuperscript{49} Companies that are not public networks but wish to establish, operate or exploit a telecommunication services resale company\textsuperscript{50} or install, operate or exploit transmitting ground stations are also required to apply for a permit. \textsuperscript{51} In accordance with the Mexican telecommunications law, public network licensees who established their own networks were allowed to provide basic long-distance telephone services beginning August 11, 1996. \textsuperscript{52} Public network licensees who wish to offer national and international long-distance services but who do not have

\textsuperscript{40} A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5, at 9.

\textsuperscript{41} Dessommes, supra note 33.

\textsuperscript{42} Federal Telecommunication Law, supra note 6, at art. 12.

\textsuperscript{43} Id.

\textsuperscript{44} Id.

\textsuperscript{45} Id. at art. 24.

\textsuperscript{46} Id. at art. 25.

\textsuperscript{47} Id. at art. 27.

\textsuperscript{48} Id. at art. 28.

\textsuperscript{49} Id.

\textsuperscript{50} Telecommunication services resale companies refer to "all individuals who, not owning or having transmission means, provide communication services to third parties through the use of the capacity" of a public network licensee. Id. at art. 52.

\textsuperscript{51} Id. at art. 31.

\textsuperscript{52} Id. at art. 74, § SEVENTH.
their own networks may begin operating on January 1, 1997. On this date, Telmex will be legally required to permit third parties to connect with its networks.

As another condition to the Telmex privatization, the Mexican government gave Telmex the right to charge a fee for interconnection service. Because Telmex owns almost all of the lines and telephone-related infrastructure in Mexico, most new competitors who obtain a license as a public network must interconnect with Telmex's network in order to wire into Mexican homes and businesses for long-distance services.

The fees for interconnection services have been a point of contention between Telmex and its competitors. Telmex argued that a high fee of approximately U.S. $14.54 is justified because it is likely to bear the majority of the cost of extending telephone service in Mexico. Telmex stated that a high fee will force its competitors to share in these costs. Telmex's competitors, on the other hand, argued that the tariff should be between U.S. $14 and U.S. $1.54. They complained that the high fee is just another way for Telmex to protect its market share.

In an attempt to foster the spirit of deregulation, the Mexican government originally planned to let the affected parties resolve the interconnection fee issue privately. However, when the parties failed to reach a compromise, the government intervened. In April 1996, the Mexican government announced that Telmex could charge an average interconnection fee for international long-distance of U.S. $5.24 per minute in 1997, dropping to U.S. $4.74 in 1998. From 1999 to 2001, rates will not exceed U.S. $3.15. The charge for domestic long-distance interconnection was fixed at U.S. $2.54 per minute—a relatively low rate meant to encourage investment and competition in the Mexican domestic long-distance market.

53. Id., at art. 74, § TENTH. Public network licensees must follow the guidelines promulgated by the SCT in the Resolution on the Interconnection Plan with Public Long Distance Networks, July 1, 1994. Id.
54. Id., at art. 74, § TENTH. See also Craig Torres, New Phone Rules in Mexico to Allow Strong Competition, WALL ST. J., Apr. 29, 1996, at A18; Mexico Finalises Competition Plans, supra note 19.
55. It is anticipated that Telmex will benefit from the confusing array of long-distance service options. If consumers do not specifically select a new long-distance carrier, their selection will automatically default to Telmex. Fainaru, supra note 2.
56. Federal Government to Determine Telephone Connection Price After Telmex & Eight Competitors Fail to Reach Agreement, SOURCEMEX: ECONOMIC NEWS & ANALYSIS ON MEXICO, Apr. 17, 1996 [hereinafter Federal Government to Determine Telephone Connection Price]. Telmex argues that the new companies are "cherrypicking" their markets; i.e., targeting the "lucrative long distance and international market, cellular telecoms, data transmission and other value added services." Complaints, as Deregulation Nears, Latin American Regional Reports: Mexico & NAFTA Report, June 13, 1996, at 8.
57. Federal Government to Determine Telephone Connection Price, supra note 56.
58. Id.
59. Torres, supra note 54. See also And Then There Were Three; Telmex, Alestra and Avantel, Latin America Regional Reports: MEXICO AND NAFTA REPORT, May 9, 1996, at 5 [collectively hereinafter Latin American Regional Reports].
60. Torres, supra note 54.
61. Id.
The size of the international long-distance interconnection fees is very important to Telmex's competitors since it will have a direct impact on the prices these service providers will charge their customers and will shape their competitive strategies. The new competitors might consider building their own public networks to escape these interconnection costs. However, this option may not be immediately available for many of the companies competing in the new telecommunications market due to the time necessary to build the infrastructure and the significant dollar investment involved. Thus, Telmex continues to enjoy substantial power over its competitors through its ability to charge interconnection fees, even though it was "officially" deregulated as of August 11, 1996.

III. Who Are the Players?

The enactment of NAFTA in 1994 and the deregulation of Mexico's telecommunications market beginning in 1995 triggered international interest in this market, particularly in the U.S. Some of the United States' largest local and long-distance telecommunications companies - AT&T, MCI, Sprint, GTE, Bell Atlantic and SBC Communications - forged alliances with Mexican firms to take advantage of this newly deregulated market. At least seven U.S-Mexican alliances have been granted licenses to compete with Telmex in Mexico's basic telecommunications services market including Avantel, S.A.; Alestra, S.A.; Unicom Telecomunicaciones, S.A.; Iusatel; Marcatel, S.A.; and Investcom, S.A. All of these ventures were formed in order to pursue expanding opportunities in local, long-distance and data.

62. Id.; Latin American Regional Reports, supra note 59. The interconnection issue in Mexico is similar to the situation in the U.S. U.S. long-distance carriers and others who want to expand long-distance telephone services to new localities are forced to interconnect with local networks in order to do so. Some in the U.S. have attempted to avoid the interconnection experience by constructing their own local networks using, for example, cable television lines.


64. Mexico Finalises Competition Plans, supra note 19.

65. Three Conglomerates Enter Long-Distance Telephone Market, Constituting First Direct Competition for Telmex, SOURCEMEX: ECONOMIC NEWS & ANALYSIS ON MEXICO, Aug. 21, 1996 [hereinafter Three Conglomerates]. Several wholly Mexican-owned companies have also been granted licenses to compete, including Miditel and Cableados y Sistemas S.A. Miditel is a company wholly owned by Antonio Canahuati Santiago, who plans to invest US$300 million to build up niche markets in long-distance services. Cableados y Sistemas is owned by the Vazquez family of Guadalajara, which also owns the Varo Group. The Varo Group operates cellular telephone companies in Northwestern Mexico. Cableados y Sistemas represents a link between the U.S. border cities and the triangle formed by Northern Baja California and the states of Sonora and Sinaloa. With an investment of US$200 million, it plans to construct 2,240 kilometers of fiber-optic lines. Three Conglomerates, supra; Rangel, supra note 2.
Indeed, in the telecommunications arena, the "giant sucking sound" that H. Ross Perot warned would follow the adoption of the NAFTA has not been the sound of jobs leaving the U.S.; rather, it comes from U.S. companies rushing to take advantage of the new opportunities which will create more jobs in the U.S.

Strategic alliances between Mexican companies and U.S. telecommunications providers will play a very important role in the development of the Mexican telecommunications market. To a certain extent, the surge in joint venture activity is attributable to straightforward business decisionmaking. By forming a joint venture, a Mexican company can tap into capital and technical knowledge of its U.S. partners. At the same time, U.S. service providers can gain insight into the local market, develop a relationship with local suppliers and avoid running afoul of the investment restrictions that still exist for foreign investors in Mexico. NAFTA also contributed to the surge in joint venture activity. By encouraging liberalization of foreign investment restrictions and phasing out tariff and non-tariff barriers to trade, NAFTA helped reduce many of the obstacles that previously would have made these ventures impractical.

A. TELEMEX.

Telmex is controlled by a private consortium consisting of U.S.-based SBC Communications, Inc., France Telecom and Grupo Carso. In April 1995, Telmex and Sprint Corp. joined forces to compete in the telecommunications markets in Mexico. The Telmex-Sprint agreement created a framework to offer a variety of cross-border services for the corporate, consumer and carrier markets. It includes provisions for cross-border marketing, joint technology transfer and licensing for intellectual property and trademarks. The alliance's principal focus is on providing international services to and from the U.S. and Canada, where Sprint is a shareholder in Call-Net, a Canadian resale carrier. Telmex also gains a link via Sprint to the Phoenix global telecommunications venture which is being established by Sprint in association with France Telecom and Duetzsche Telekom. Sprint and Telmex commenced providing basic services to customers in Mexico and the United States in 1996.

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66. Inside Latin American Telecommunications: Mexico, 6 INSIDE TELECOM (June 20, 1995).
67. Enrique Rangel, Telmex to Seek U.S. Presence, THE DALLAS MORNING NEWS, Aug. 24, 1996, at 1A. The consortium owns all of the voting shares of Telmex. Most of the non-voting shares are owned by various Mexican and foreign investors who purchased the Telmex stock on open exchanges. Telmex has also formed a partnership with television giant, Grupo Televisa, by buying a 49 percent stake in Televisa's cablevision unit. Geldzahler, supra note 24.
68. Rangel, supra note 67. As part of the Mexican government's continuing effort to deregulate the telecommunications sector, it also plans to encourage private investment in the state-owned satellite services company, Telecomunicaciones de Mexico (Telecomm).
69. Communications: Sprint, Telmex Sign Agreement, MEX. BUSINESS MONTHLY (June 1, 1995).
70. Id.
71. Mexico Finalises Competition Plans, supra note 19.
72. Id.
B. AVANTEL, S.A.

In September 1994, MCI Communications Corp. and Grupo Financiero Banamex-Accival, Mexico's largest financial group, formed Avantel to provide competitive domestic and international long-distance telecommunications services to business, government and residential customers throughout Mexico. In September 1995, Avantel became the first company to win a government license to compete in Mexico's long-distance telephone market. Because Avantel was quick to install equipment, including private lines, it was able to initiate service in August 1996 and begin competing with Telmex, albeit on a limited basis. Avantel expects to increase its service to include a wide range of users via its 3,400-mile network. Given its strong early efforts, Avantel will likely become one of Telmex's strongest competitors in the Mexican long-distance telecommunications market.

C. ALESTRA-UNICOM.

In November 1994, AT&T entered into an agreement with Grupo Alfa, a Mexican consortium of industrial companies, to form the Alestra venture. Under this agreement, 51 percent of Alestra's stock is held by Grupo Alfa and 49 percent by AT&T, which pledged to invest US$1 billion in the venture's operations. Alestra received a public network license from the SCT in early 1996. In May 1996, the AT&T-Alfa Alestra venture merged with Unicom Telecomunicaciones, S.A., a venture partnership among GTE International Telecommunications, Inc., Grupo Financiero Bancomer, Grupo Visa, and Spain's Telefonica Internacional. The two giant U.S. providers -- AT&T and GTE -- joined forces to increase their competitive strengths against Telmex.

74. See MCI COMMUNICATIONS CORP., FORM 10-K FOR FISCAL YEAR ENDED DEC. 31, 1995, at 15; Communications — MCI Phone Venture Breaks Ground, 5 MEX. BUSINESS MONTHLY (Oct. 1, 1995); MCI COMMUNICATIONS CORP., supra note 74; Mexico Gets Set for New Year Competition in Long Distance, FN Tech Telecom Markets (Dec. 18, 1996).

75. Three Conglomerates, supra note 65. See MCI Gives U.S. Customers Link to Mexico, 13 TELECOMMUNICATIONS ALERT (Aug. 29, 1996). MCI and British Telecom, which already has a 20% stake in MCI and plans to acquire this company in a $22 billion stock swap, are very active in Mexico, where they are building networks, creating telephone companies and exporting telecommunications technology. MCI and BT to Merge: Network Integration Issues Largely Solved, 6 Broadband Networking News (Nov. 12, 1996).

76. MCI Gives U.S. Customers Link to Mexico, supra note 76; Three Conglomerates, supra note 65.

77. Latin America Regional Reports, supra note 54, at 5.


81. Grupo Visa, also known as Valores Industriales, is the parent company of Grupo Femsa, a beer manufacturer and owner of the Coca-Cola franchise in Mexico. ibid.

82. On December 7, 1995, the Bancomer/Visa Financial Group, GTE and Telefonica Internacional formed Unicom to compete in the Mexican market. Latin American Regional Reports, supra note 59.
Before Alestra and Unicom merged, Unicom had received its own license to compete in the new market. As part of the negotiations with the Mexican government, which reviewed the proposed merger, Unicom was forced to return the license to the Mexican government so that the surviving company could retain the Alestra name. Alestra plans to use Unicom’s original investment of US$900 million to develop a radio spectrum project and to operate other telecommunications services. Like Avantel, Alestra is projected to be one of Telmex’s largest competitors.

D. IUSATEL.

Iusatel is a Chilean long-distance carrier controlled by Grupo Iusacell, S.A., one of Mexico’s largest telecommunications operators. In October 1993, Bell Atlantic acquired a 42 percent stake in Grupo Iusacell, at a cost of more than US$1 billion. The Grupo-Iusacell-Bell Atlantic partnership, which submitted an application to SCT on behalf of Iusatel, received a license in October 1995 to offer local and long-distance services in the Mexican telecommunications market. Through Iusatel, the Grupo-Iusacell-Bell Atlantic partnership expects to invest US$1.3 billion to construct a 14,000 kilometer fiber-optic network to be built by 2000.

In addition to long-distance services, Grupo Iusacell and its major shareholder, Bell Atlantic, are also attempting to offer wireless local loop services. Until recently, however, the Mexican government would not allow Grupo Iusacell to develop these services, prompting concerns among the foreign investment community and Bell Atlantic that even with the liberalized and deregulated telecommunications market, the political environment in Mexico was still too unstable for foreign investment. As of October 1996, however, Grupo Iusacell signed an agreement with the Mexican government to provide wireless technology to rural areas. The government’s agreement with Grupo Iusacell is part of its five-year plan to develop rural telephony in Mexico.

84. Galvan, supra note 80. The two Mexican investors will control 51 percent of Alestra, with Grupo Alfa holding 25.6 percent and Alestra’s two main partners, Bancomer and Visa, holding 25.4 percent. Alestra’s foreign partners, AT&T, GTE Telefonica de Espanola, will hold 20 percent, 14.5 percent and 14.5 percent, respectively. Latin America Regional Reports, supra note 59.
85. Galvan, supra note 80.
86. Three Conglomerates, supra note 65.
88. Grupo Iusacell Awarded Long Distance Concession, 10 MEX. TRADE & L. REP. 4 (OCT. 1995).
89. Galvan, supra note 80, Communications & Transportation Secretariat Approves Permit for MCI-Banamex Partnership to Offer Long-Distance Service, SOURCEMEX: ECONOMIC NEWS & ANALYSIS ON MEXICO, Sept. 13, 1995.
E. MARCATEL, S.A.

Marcatel was originally formed in late 1994 through an alliance among Mexico's Radio Beep, Teleglobe of Canada and U.S.-based IXC Communication and Westel Line. Teleglobe of Canada subsequently withdrew its minority share investment in June 1995. Marcatel received a license to compete as a public network in late October 1995. The venture's investment programs call for US$2.5 billion, the largest of any of the ventures competing for licenses in Mexico. Beginning in January 1997, Marcatel will operate a 1,300 kilometer link between Mexico City, Guadalajara and Monterrey. Over the next five years, the venture intends to construct approximately 11,700 kilometers of fiber-optic network, to be complemented by other services, including value-added services.

F. INVESTCOM, S.A.

Investcom was formed by Grupo Comunicaciones San Luis S.A., which holds 51 percent, and Nextel, LCC and Carlyle, which hold the remaining 49 percent. Investcom received a long-distance phone license in late October 1995 and plans to invest US$412 million.

IV. Impact of NAFTA on the Telecommunications Markets.

Effective January 1, 1994, the NAFTA entered into force among the United States, Canada and Mexico. The treaty has a number of key objectives, including the elimination of tariffs and other trade barriers, the promotion of fair competition, the enhancement of investment opportunities and the establishment of a dispute resolution mechanism. The telecommunications equipment and services sectors are among the primary beneficiaries of the NAFTA. The treaty substantially eliminates tariffs and non-tariff barriers affecting telecommunications equipment imports, allows NAFTA member investment in telecommunications equipment and services and establishes parameters for telecommunications equipment standards.

94. Three Conglomerates, supra note 65; Galvan, supra note 80.
95. Geldzahler, supra note 24.
96. Galvan, supra note 80.
98. Galvan, supra note 80.
100. Three Conglomerates, supra note 65.
102. Three Conglomerates, supra note 65.
104. Provisions relating to these sectors are outlined in the NAFTA Telecommunications Chapter, ch. 13.
105. Dessommes, supra note 33.
With the passage of NAFTA, the tariffs on over 80 percent of U.S.-manufactured telecommunications infrastructure and consumer equipment, such as telecommunications line equipment, private branch exchanges, cellular phones, modems and equipment for broadcasting and telecommunications parts, were reduced to zero. Not all tariffs have been phased out, however. Tariffs on approximately 19 percent of equipment exports, such as switches, radio transmitters, receivers and transceivers, will not completely phase out until the end of the decade. Tariffs applied to switching equipment, for instance, were set at eight percent in 1995 and will be reduced every January 1 until completely eliminated in January, 1998. Tariffs on approximately one percent of telecommunications products, such as coaxial cable and tone-only pagers, will be phased out over ten years.

The treaty also facilitates NAFTA member investment in telecommunications products and services. It provides that U.S. telecommunications companies must be given access to and use of the Mexican public networks or services on reasonable and nondiscriminatory terms and conditions. This provision means that U.S. firms have the ability to lease private lines, attach terminal or other equipment to public networks, interconnect private circuits to public networks, perform switching, signaling and processing functions and use operating protocols of their choice. However, the operation and provision of public networks and services are not subject to NAFTA. Thus, for example, NAFTA does not require member countries to provide public network access if public networks do not exist, nor does it require that member countries make private networks available for public access and use. Furthermore, conditions for access and use may

106. NAFTA, supra note 103, at art. 302.2, provides that duties on "category A" items, which include those described in the text, were eliminated on January 1, 1994. See also Office of U.S. Trade Representative - Mexico, Mexico: 1996 Trade Estimate, Apr. 1, 1996, [hereinafter Trade Estimate]; Dessommes, supra note 33; A Guide to Telecommunications Markets, supra note 5, at 25.

107. NAFTA, supra note 103, at art. 302.2, provides that duties on "category B" items, which include those described in the text, will be gradually removed in five annual stages beginning January 1, 1994 and ending January 1, 1998. See also A Guide to Telecommunications Markets, supra note 5.

108. Dessommes, supra note 33.

109. NAFTA, supra note 103, at art. 302.2, provides that duties on "category C" items, which include those listed in the text, will be gradually removed in ten annual stages beginning January 1, 1994 and ending January 1, 2003. See also A Guide to Telecommunications Markets, supra note 5, at 25.

110. NAFTA, supra note 103, at art. 1302(1). Nondiscriminatory means "on terms and conditions no less favorable than those accorded to any other customer or user of like public telecommunications networks or services in "like circumstances." NAFTA art. 1302(8).

111. Terminal equipment means "any digital or analog device capable of processing, receiving, switching, signaling or transmitting signals by electromagnetic means and that is connected by radio or wire" to a public network. NAFTA art. 1310.

112. NAFTA art. 1302(2).

113. NAFTA art. 1301(3). Although the NAFTA does not specifically address the application of interconnection fees for public network access and use, it does state that NAFTA parties must ensure that pricing of public network services "reflects economic costs directly related to providing the services." NAFTA art. 1302(3).
only be imposed if necessary to safeguard the public service responsibilities of public network operators or to protect the technical integrity of the public networks. NAFTA also provides that each country will ensure that its licensing or other authorization procedures for the provision of enhanced or value-added telecommunications services are transparent, nondiscriminatory and applied within a reasonable period of time.

NAFTA also sets parameters for the establishment of standards-related measures that apply to the importation of telecommunications equipment. The use of standards-related measures governing telecommunications products, which include standards, technical regulations, and conformity assessment procedures, is one of the most significant types of non-tariff barriers addressed by NAFTA. Onerous standards-related measures increase costs to the importer in terms of time and added expenses, which can discourage trade and harm the competitive positions of foreign importers. The desire to eliminate the use of standards-related measures for telecommunications and other products as non-tariff barriers to trade was a major impetus of NAFTA.

NAFTA contains two chapters which specifically govern standards-related measures. Chapter 9 deals with all standards-related measures which may affect trade in goods between the NAFTA parties, except as they relate to telecommunications equipment.

114. NAFTA art. 1302(6).
115. Under the NAFTA telecommunications chapter, “transparency” means that information affecting access to and use of public networks and services must be made publicly available, including tariffs and other terms and conditions of service; specification of network and service technical interfaces, information on standardizing organizations; conditions for the attachment of terminal or other equipment; and notification, permit, registration or licensing requirements. NAFTA at art. 1306.
116. NAFTA at art. 1303(1).
117. Standards-related measures include any standard, technical regulation or conformity assessment procedure affecting the access to or use of the Mexican public network. NAFTA arts. 915 & 1310.
118. A standard means “a document, approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for goods or related processes and production methods, or for services or related operating methods . . . . It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a good, process, or production or operating method.” NAFTA art. 915.
119. A technical regulation means “a document which lays down goods’ characteristics or their related processes and production methods, or services’ characteristics or their related operating methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packing, marking or labelling requirements as they apply to a good, process, or production or operating method.” NAFTA art. 915.
120. A conformity assessment procedure includes any procedure “used, directly or indirectly, to determine that a technical regulation or standard is fulfilled, including sampling, testing, inspection, evaluation, verification, monitoring, auditing, assurance of conformity, accreditation or registration or approval used for such a purpose . . . .” NAFTA art. 915.
122. Id.
123. NAFTA, supra note 103, at arts. 901-915.
NAFTA has a separate chapter, Chapter 13, concerning telecommunications equipment and applicable standards. Chapter 13 limits the types of standards-related measures that may be imposed on the attachment of terminal and other telecommunications equipment to public networks. Any mandatory interface standards for attachment of terminal or other equipment to public networks may be imposed "only to the extent necessary" to ensure no harm to the network or to the users of the network. NAFTA parties are also obligated to ensure that all standards-related measures are transparent and nondiscriminatory and that applications of such procedures are processed expeditiously. The parties are further required to permit any technically qualified entity, whether in the U.S., Mexico or Canada, to test and certify terminal and other telecommunications equipment to be attached to the public networks. To this end, NAFTA provided that as of January 1, 1995, each party must have adopted standards-related measures that comply with NAFTA telecommunications obligations and established whatever procedures were necessary to permit the acceptance of test data from any technically qualified laboratories or testing facilities located in the territory of another.

Industry and government officials in the U.S. have expressed two major concerns about Mexico's compliance with its telecommunications obligations under NAFTA. First, although Mexico has established procedures to accept test data relating to terminal attachment standards from accredited laboratories in the U.S. and Canada, it has not developed a similar system for the acceptance of test data relating to telecommunications product safety standards. Without both sets of accreditation procedures in place, for

124. NAFTA arts. 1301-1310. Chapter 13 applies to: "(a) measures adopted or maintained by a party relating to access and use of public telecommunications transport networks or services by persons of another Party, including access and use by such persons operating private networks; (b) measures adopted or maintained by a Party relating to the provision of enhanced or value-added services by persons of another Party in the territory, or across the borders, of a Party; and (c) standards-related measures relating to attachment of terminal or other equipment to public telecommunications transport networks." NAFTA art. 1301.

125. NAFTA art. 1304(1).

126. Article 1304(1) of the NAFTA provides that "each Party shall ensure that its standards-related measures relating to the attachment of terminal or other equipment to the public telecommunications transport networks, including those measures relating to the use of testing and measuring equipment for conformity assessment procedures, are adopted or maintained only to the extent necessary to: (a) prevent technical damage to public telecommunications transport networks; (b) prevent technical interference with, or degradation of, public telecommunications transport services; (c) prevent electromagnetic interference, and ensure compatibility, with other uses of the electromagnetic spectrum; (d) prevent billing equipment malfunction; or (e) ensure users' safety and access to public telecommunications transport networks or services."

127. NAFTA art. 1304(5)(a).

128. NAFTA 1304(5)(b).

129. NAFTA art. 1304(6).

130. TRADE ESTIMATE, supra note 106.

131. Id.
terminal attachment standards and for product safety standards, U.S. exporters face substantial difficulties in getting their telecommunications equipment into Mexico to compete in the newly deregulated telecommunications market.\textsuperscript{132}

Second, the U.S. believes the mandatory interface standards Mexico has imposed on terminal attachment equipment exceed NAFTA's limitations. Mexico currently requires that all telecommunications products attached to its public network comply with certain mandatory interface standards.\textsuperscript{133} This homologation requirement is a certification procedure with the SCT which ensures the product will not harm the Mexican telecommunications network or users.\textsuperscript{134} Taken as a whole, these criteria exceed the limitations placed on such standards by NAFTA.

One of the reasons these standards are so burdensome is because the terminal attachment equipment importer (manufacturer or distributor) is required to submit a large amount of data substantiating that the equipment's electronic specifications are consistent with the public network.\textsuperscript{135} This procedure applies to each type of terminal attachment equipment exported into Mexico. The certification process is both time consuming and duplicative. For example, the Mexican government does not allow importers to share product certifications, requiring that each obtain its own, separate certification regardless of whether one was already given to another importer on the same type of equipment.\textsuperscript{136} This process results in a significant non-tariff barrier to trade. Some importers have attempted to deal with this problem by setting up trading companies in Mexico to act as their importer of record. Even though this tactic eliminates the certification problem, the imported goods are still subject to mandatory inspections, while Mexican goods are only subject to random inspections.\textsuperscript{137}

Because the Mexican homologation requirements are so complicated and time consuming,\textsuperscript{138} most exporters are forced to hire a Mexican telecommunications expert or independent engineer ("peritos") to conduct the necessary testing and certification.\textsuperscript{139} This tactic may lessen the time required to meet Mexico's homologation requirements, but it still raises the cost of exporting telecommunications products into Mexico, thereby increasing the cost of that product in the Mexican market. In addition to the requirements already described, equipment exported into Mexico may be required to undergo further physical testing by Mexican laboratories to determine if it complies with various other Mexican interface standards.\textsuperscript{140}

The possibility that Mexico has failed to comply fully with its NAFTA telecommunications

\textsuperscript{132} Bilateral MOUs, supra note 11, at 1.
\textsuperscript{133} A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5.
\textsuperscript{134} Dessommes, supra note 33.
\textsuperscript{135} Id.
\textsuperscript{136} Id.
\textsuperscript{137} Trade Estimate, supra note 106.
\textsuperscript{138} Mexican regulations provide that the entire testing and certification process of terminal attachment equipment should take between 90 and 180 days. See A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5, at 28. In reality, however, certification procedures for such equipment have taken substantially longer.
\textsuperscript{139} Id.; Dessommes, supra note 33.
\textsuperscript{140} A GUIDE TO TELECOMMUNICATIONS MARKETS, supra note 5, at 28.
cations obligations came to light in connection with an annual review of the operation of U.S. telecommunications trade agreements performed by the USTR. Section 1377 of the Omnibus Trade and Competitiveness Act of 1988 (Trade Act) requires the USTR to review, by March 31 of each year, the operation and effectiveness of U.S. telecommunications trade agreements to help ensure that its trading partners are not in violation of any of the trade commitments made to the U.S. The 1996 review, which was completed on March 31, 1996, focused on Mexico's implementation of its telecommunications obligations under the NAFTA. The USTR determined that Mexico was not in compliance with its obligations, because it had not implemented the necessary procedures for acceptance of test data relating to product safety standards from another country's laboratories by January 1, 1995, and because its current mandatory interface standards relating to terminal attachment equipment exceed the NAFTA limitations.

Until recently, Mexico has been unwilling to remedy this situation. The Mexican government argued that NAFTA Chapter 9, rather than Chapter 13, governs this issue and provides that each of the parties has until January 1, 1998 to develop its standards-related infrastructure before it is required to accredit or otherwise recognize testing and certification performed by U.S. or Canadian bodies. Mexico has also contended that U.S. complaints about Mexican standards-related measures applicable to telecommunications equipment are hypercritical in light of its unfair trade policies regarding U.S. standards affecting Mexican exports such as tuna, cement and tomatoes.

U.S. officials rejected these assertions and argued that all standards-related measures concerning telecommunications equipment and services are governed by Chapter 13 of NAFTA, which provides for the January 1, 1995 compliance date. In April 1996, the U.S. warned that it would challenge Mexico on these issues under NAFTA's dispute settlement provisions if rapid progress was not made. Under the dispute resolution mechanism outlined in NAFTA, any government may request consultations at any time on disputes arising under NAFTA. If consultations between the disputing parties fail to resolve the

141. Annual Review, supra note 11.
142. U.S. OFFICE OF THE TRADE REPRESENTATIVES; 1995 ANNUAL REPORT: MONITORING AND ENFORCEMENT ACTIVITIES, Mar. 27, 1996. Section 1377 is designed to determine "whether any act, policy or practice of the foreign country that entered into a telecommunications-related agreement with the United States (1) is not in compliance with the terms of the agreement; or (2) otherwise denies, within the context of the specific agreement, mutually advantageous market opportunities to telecommunications products and services of U.S. companies in that country." Id. An affirmative determination under § 1377 is treated as an affirmative determination of a violation of a trade agreement under § 304(a)(1)(A) of the Trade Act of 1974.
143. Annual Review, supra note 11.
144. Id.
145. Bilateral MOUs, supra note 11, at 13.
146. NAFTA, supra note 103, at ch. 9; Bilateral MOUs, supra note 11, at 14.
147. Federal Government to Determine Telephone Connection Price, supra note 56.
outstanding issue, the complaining party or parties may request mediation by the NAFTA Trade Commission.\textsuperscript{150} If such consultations or mediation do not resolve the matter, a country may request a dispute settlement panel to arbitrate the dispute.\textsuperscript{151} If the offending party loses a dispute and fails to correct its practice, the other party is entitled to receive trade compensation or to take specified retaliatory measures.\textsuperscript{152}

The United States, Canada and Mexico commenced negotiations to resolve these outstanding trade issues. In August 1996, the NAFTA Telecommunications Standards Subcommittee (TSS)\textsuperscript{153} held a meeting in Mexico City to resolve these disputes. At the meeting, the U.S., Mexico and Canada tentatively agreed to develop a scheme for the mutual recognition of product safety test data for telecommunications equipment through bilateral agreements between private laboratories.\textsuperscript{154} According to this proposed scheme, one country’s laboratories would be permitted to enter into private-sector bilateral agreements for the exchange of product safety test data with laboratories in another country.\textsuperscript{155} Implementing this scheme could ease the standards-related requirements for telecommunications exports to Mexico and simultaneously defuse U.S. and Canadian complaints that Mexico has failed to comply with its NAFTA obligations in this area.\textsuperscript{156}

The parties are also trying to reach an agreement to streamline the mandatory interface standards which Mexico has placed on network terminal attachment equipment imports.\textsuperscript{157} In an effort to resolve this issue, Mexico agreed to develop a new set of interface standards for attachment of terminal equipment to its public network.\textsuperscript{158} The TSS has requested that the proposed standards be reviewed against Article 1304 of NAFTA to determine whether they are limited solely to those that are necessary to ensure no harm to the public network or to the user.\textsuperscript{159}

\begin{itemize}
  \item[149.] NAFTA, \textit{supra} note 103, at art. 2006.
  \item[150.] NAFTA art. 2007.
  \item[151.] NAFTA art. 2008.
  \item[152.] NAFTA art. 2019.
  \item[153.] The TSS was established under Article 913(5)(a)(ii) of NAFTA. It is comprised of representatives of each member country. The TSS was created to address any standards-related issues that arise in connection with telecommunications equipment or services. It is further authorized to ensure, to the “greatest extent practicable” that the standards-related measures for telecommunications equipment as defined in Chapter 13 of NAFTA are compatible among the NAFTA parties. NAFTA art. 913(5).
  \item[154.] Bilateral MOUs, \textit{supra} note 11, at 11.
  \item[155.] \textit{Id.} at 14.
  \item[156.] \textit{Id.} at 1. This scheme of private bilateral accords would substitute for what originally was conceived under NAFTA to be a governmental commitment to facilitate the exchange of product safety test data.
  \item[157.] \textit{Id.} at 14.
  \item[158.] Minutes of Aug. 15-16 NAFTA Telecom Meeting, \textit{reprinted in} Bilateral MOUs, \textit{supra} note 11, at 14.
  \item[159.] NAFTA, art. 1304.
\end{itemize}
V. Conclusion.

Mexico has taken huge strides towards reforming its legislative and regulatory telecommunications regimes. The Mexican government has privatized its long-distance monopoly, enacted liberalizing legislation and deregulated its telecommunications markets. In addition, Mexico chose to be a NAFTA signatory, which, together with its internal reform, played a major part in opening Mexican markets to telecommunications service providers from the U.S. and Canada.

The process appears to be working. Many foreign firms are investing heavily in the newly deregulated markets. But some obstacles still exist. Telmex interconnection fees impact the rates its competitors can charge for the same services Telmex provides. Noncompliance with NAFTA obligations results in non-tariff barriers to free trade, which counters the main objective of NAFTA. Both Mexican consumers and U.S. telecommunications companies have substantial interests at stake in making sure the elimination of these and other obstacles continues.