THE LAWS AND AGENCIES REGULATING CROSS BORDER COMMUNICATIONS BETWEEN THE UNITED STATES AND MEXICO

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Despite concerted efforts over the last 25 years to deregulate, the telecommunications industry remains highly regulated in the United States. And although Mexico began the privatization its telecommunications industry in the 1990s, the telecommunications in Mexico remains more highly regulated than in the U.S., and remains a monopolistic environment with the continued dominance of Telmex.

To get both these regulatory systems to work together in a cross border (used interchangeably with trans-border) communication project is difficult at best. In addition to the legal challenges, there are differences in engineer standards, international accounting rates, T-1/E-1 interfaces, metric vs. standard, English vs. Spanish and cultural differences.

The recent congressional debate regarding immigration reform and border security has increase the complexity of this communication niche with society's perceived need to control its physical *and* communication borders; we predict cross border telecommunication will become even more regulated in the years to come.

At the same time, it is imperative that the people of the U.S. and Mexico be able to communicate effectively and efficiently. Mexico and the United are great neighbors and form one of the largest and most important commercial borders in the World generating billions of dollars in communications services revenue every year. This paper will briefly review the laws and governmental agencies that regulate and control this niche industry.

REGULATORY AGENCIES

UNITED STATES

The primary agency responsible for interstate and international communications in the U.S. is the Federal Communications Commission (FCC) which is an independent government agency, directly responsible to Congress. Each state also has some regulatory authority over intrastate carrier and local service. In Texas, this agency is referred to as the Public Utility Commission (PUC).

Five Commissioners appointed by the President direct the FCC. The State Department also has some input on international communication issues through its Bureau of International Communications and Information Policy. The Chairman of the FCC is Kevin J. Martin who was appointed Chairman by George W. Bush in April of 2006.

The Chairman's office directs all FCC activities and delegates responsibilities to staff units and Bureaus. There are six operating Bureaus, two of which have applicability to cross border communications. The International Bureau administers the Commission's international telecommunications policies and obligations. The International Bureaus states publicly that their policy initiative included enhancing the competitiveness of U.S. industry domestically and abroad; to promote a high quality, reliable, globally interconnected and interoperable international infrastructure; and, to promote U.S. interest in international communications and competitiveness. The Wireless Telecommunications Bureau oversees cellular and PCS phones, fixed microwave, pagers and two-way radios. This Bureau also regulates the use of radio spectrum to fulfill the communications needs of businesses, local and state governments, public safety service providers, aircraft and ship operators, and individuals.

MEXICO

The primary agency responsible for communications in the Mexico is the Comisión Federal de Telecomunicaciones (COFETEL), which is an autonomous administrative and technical agency, which resides within the Secretaria de Comunicaciones y Transportes (SCT), a cabinet level position whose secretary is appointed by the President.

COFETEL was established in 1996 in conjunction with the end of Telmex's monopoly through the sale of concession for the provision of telecommunications to other companies, including XC Networks. COFETEL is the primary telecommunications regulatory body in Mexico, although the SCT retains certain important responsibilities. On some issues, COFETEL makes decisions requiring little, if any, input from the SCT; while on other issues, COFETEL must obtain the approval of the SCT. COFETEL was formed in part to de-politicize the regulatory process in Mexico.

A four person Commission, with the Chairman having the deciding vote, directs COFETEL. According to Mexican law and regulations, COFETEL's role is to carry out studies; grant, modify and revoke concessions and permits; submit for approval by the SCT a frequency allocation and coordination program; administer the radio-electric spectrum; coordinate (with the SCT) frequency issues regarding satellites; establish mandatory equipment standards; certify equipment; and establish and maintain a registry of telecommunication providers. In its role as federal administrator of radio spectrum, COFETEL sets parameters for power, modulation and other technical issues, grants equipment approvals, establishes auction processes, maintains databases of users and frequencies, and performs technical analysis.

There are two primary bureaus that handle transborder communications inside the COFETEL. The first is the Coordinación General de Asuntos Internacionales, which administers the COFETEL's international telecommunications policies and obligations, multilateral and bilateral matters, as well as the international negotiations in matter of politics, technology and services of telecommunications. The other is the Área General de Ingeniería y Tecnologia, which handles technical and wireless coordination issues.

THE LAWS OF CROSS BORDER COMMUNICATION

Applicable Laws in the United Sates

The applicable laws regarding U.S. telecommunications are based on the Communications Act of 1934 (the "Act") and can be found in Title 47 Telecommunication in the United States Federal Code. The applicable sections for fixed microwave systems can be found in Part 101. There is a massive amount of law and regulations in the U.S. compared to

Mexico, which is ironic given the stated policy of the FCC is to deregulate all aspects of telecommunication.

The framework for the laws in the U.S. are geared to promote competition in the telecommunication sector and to limit harmful interference and waste in utilizing the radio electric spectrum. The FCC has stated historically that the dominance of Telmex results in excessive charges to consumers and that the primary method to decreasing these costs is to inject competition into the marketplace. The FCC believes deregulation will result in more companies entering the market and lead to competition and reduced prices.

Wired connection using the public network (a/k/a international long distance)

Long distance telephone, data and other services delivered via landlines are essentially unregulated in the U.S. There are no barriers to entry and exit and no obligation to offer services under filed tariffs. As such, the FCC does not directly limit or regulate any traffic to or from Mexico, but does theoretically impose the following requirements:

1. The link must be approved and registered pursuant to protocols established by the U.S. and Mexican governments;
2. The U.S. carrier must hold a 214 License;
3. The link does not violate the laws or regulations of Mexico; and
4. The call must be coded correctly so as to allow proper payment and accounting of the termination and interconnection fees.

The FCC has sought to reduce international telephone charges by trying to persuade COFETEL to reduce the international settlement rates charged by Telmex. However, these rates are negotiated in interconnection agreements between US long distance carriers and Telmex and are not under any direct control of the FCC. The FCC for the most part has not enforced these regulations and the "grey market" or illegal traffic between the U.S. and Mexico is a multi-hundred million-dollar industry. Interestingly, the Spanish word for this type of bypass traffic is "tráfico chocolate". The grey market would be substantially larger due to the wide arbitrage available if it were not for the prevalent call quality and service interruptions associated with type of services. These quality issues are caused by the trafficker's substandard equipment and links and because of Telmex's vigilance in shutting down access it suspects of carrying grey market voice traffic. There have been

some recent cases involving MCI, AT&T, NTS Communication, and GCI where bypass violations have been prosecuted in the U.S.. In February of 2002, NTS Communications of Lubbock Texas pleaded guilty to fraud charges and agreed to pay restitution of $22 million dollars to AT&T (formerly Southwestern Bell). In that case, prosecuted by the U.S. Attorney Office for the Western District of Texas, NTS was found to have used equipment that deprived AT&T of information needed to verify whether calls made by NTS customers were interstate or intrastate, which effected how they should be billed. NTS altered the call record and redirected the call thereby bypassing negotiated termination rates.

Data connections (for example IP traffic) are exempt from termination and international settlement fees, which are the amounts that carriers across borders pay their counterparts for accepting traffic through official international gateways. This broad exemption is a huge loophole used by the grey market traffickers to avoid paying Telmex's interconnection fees. In addition, this data exception is a huge incentive for users to migrate systems toward VOIP technology.

Wired Private Links

The FCC does not *per se* regulate private communications systems or data systems and only imposed the following requirements:

1. The link must be approved and registered pursuant to protocols established by the U.S. and Mexican governments;
2. The link does not violate the laws or regulations of Mexico;

Wireless Private Links

Section 301 of the Act requires that no person shall use or operate any apparatus for the transmission of energy or communications or signals by radio within the U.S. except under and in accordance with the Act and with a license. The FCC administers this license process and the rules are found in part 101. These rules are excruciatingly detailed and complex.

However, the good news is that for the most part, anyone, anywhere, for any reason can install point-to-point microwave systems, as long as:

1. An engineering study is performed to insure that the installation will not interfere with any other station currently operating;

2. The station be properly entered into the FCC's database;
3. The station operates within power limitations in the allocated frequency bands;
4. The filing fee is paid;

And for international links the additional requirements that

5. The link must be approved and registered pursuant to protocols established by the U.S. and Mexican governments; and
6. The link does not violate the laws or regulations of Mexico.

The first four requirements are primarily administrative and engineering processes and culminate with properly entering link information into the FCC database. XC Networks has specialized authorizations and experience in meeting the final two requirements. Point-to-point systems operating in the unlicensed bands (for example, WiFi type services) do not require compliance with items 1-4 above, but still must meet requirement 5 and 6 which is not possible given current Mexican law as discussed below.

Beginning in 2006, the FCC began to actively enforce its rules regarding unlicensed microwave stations operating in the border areas of US and Mexico. On August 25, 2006, the FCC issued five separate Forfeiture Actions against unauthorized 23 GHz microwave links. In the Matter of Kojo Worldwide Corporation, the FCC issue a monetary forfeiture in the amount of US$10,000 to Kojo for willful and repeated violation of Section 301 of the Act for operating an unlicensed cross border microwave link (*see* FCC File No. EB-04-SD-187).

APPLICABLE LAWS IN MEXICO

The Mexican government owned the incumbent telecommunication monopoly until 1990 and historically the incumbent provider was also the maker of communication laws. This changed and the foundation of modern communication law in Mexico is the legal concession granted to Telmex in 1990 at the time the privatization of Telmex began. It granted Telmex the <u>exclusive</u> concession for local, long-distance and international telephone and data services. It also granted Telmex ownership of the public exchanges, the national network of local telephone lines and long distance transmission facilities. Prior to August 1996, if you were calling to, from, or within Mexico, you legally had to use Telmex.

The Mexican Law of Telecommunications was passed in 1995 and is the impetus for introducing oligopoly competition into the marketplace by beginning the process of opening up local and long distance services by ending Telmex's state imposed monopoly. However, the law does not allow free competition and requires a provider must first be granted a concession prior to providing public network local or long distance services. The 1995 law also promoted, through the issuance of additional concessions, the development and exploitation of public and private telecommunications networks, the radio electric spectrum and satellite communications.

These ground rules also led the sales of fixed microwave concessions to eighteen concessionaires. TCA, a Mexican subsidiary of XC Networks, purchased a 23 GHz point-to-point and 10.5 GHz point to multipoint concessionaire. Prior to 1996, a user could petition the SCT to license a microwave installation and these permits have been given partial grandfather exceptions. Today, this system has been privatized and users must use an authorized Mexican concessionaire. The SCT and COFETEL regularly enforce these regulations and will typically confiscate equipment it finds operating in contravention of Mexican law.

What are the practical effects of these laws to users of cross border telecommunications services?

Wired connection using the public switched telephone network (a/k/a international long distance)

To utilize a public telecommunication cross border transmission facility in Mexico, a user must go through Telmex or a Mexican concessionaire who takes that traffic through an international gateway expressly authorized by the SCT. This system will result in international long distance charges being billed by the carrier providing service in the call's originating country. A public telecommunications network is defined as "a telecommunications network used to provide commercial telecommunications services, but does not included terminal equipment or networks beyond the terminal connection point."

Wired connection using a private circuit

Private networks not using wireless technology are theoretically unregulated; however, all cross border transmission facilities require express authorization from SCT and such authorizations are granted only to pubic network concessionaires. In addition, the user needs a connection into their private network and Telmex primarily controls these last mile connections. The business reality is that a user desiring copper or fiber private link will lease a private E-1 link from Telmex or a competitive access provider and connect to a leased T-1 supplied by AT&T or Quest located at a approved international gateway. This will eliminate international toll charges assessed on a per minute basis, but still requires private circuit charges both in Mexico and the U.S. These systems will not allow the simultaneous transmission of data and voice. If there is a problem with the link, both providers will always blame the problem on the other provider.

Wireless Private Networks

Licensed wireless connections are the preferred method of cross border transmission; however, these systems must meet the requirements imposed by the U.S. and Mexican governments. Article 28 of the 1995 Mexico law requires that spectrum concessionaire using the licensed frequencies be utilized when transmitting private networks directly across the border. The unlicensed bands are specifically prohibited from carrying private or public traffic across the border. The COFETEL form required for identifying free band installations in the 2.4 and 5.8 GHz installations requires that the applicant swear to the following statement:

> …I attest and swear that these links will be used exclusively for private use and no telecommunications services will be made available for use by third parties. I further accept that all equipment involved in setting up these links for private use will not cause harmful interference with equipment pursuant to ICM or other systems authorized by SCT, nor seek protection against interferences originating from such. Installation of links in a series or cross border links is not allowed.

The 1995 Act defines private telecommunications networks as those designed to satisfy the specific telecommunications needs of certain individuals which do not involve exploitation of the networks services or capacity.

In summary, a user can utilize an authorized Mexican concessionaire to legally cross the border via a wireless connection, terminate in a facility on the U.S. side and then access the U.S. public switched network and avoid all international connection fees. This system allows person in the U.S. to dial a U.S. phone number and have it ring into Mexico or a person in Mexico to dial the U.S. as if making a local or domestic long distance call.

Interference and Quality of Service (QOS) Issues

Using spread spectrum radios to cross the border violates the laws of the U.S. and Mexico and subjects users to being shut down and fined; however, there are hundreds of illegal links operating cross border. It is our experience that interference and poor call quality are more of a "real world" importance than the esoteric telecommunication laws of the U.S. and Mexico. If you are operating illegal systems across the border, or even *unlicensed* legal private systems internal to Mexico or the U.S., you are precluded from taking any action against someone interfering with your system. In addition, you are subject to being shut down by the FCC or COFETEL if your system causes interference with a licensed user. The growing popularity of WiFi and spread spectrum systems causes significant interference issues in 2.4 and 5.8 GHz bands and these systems have numerous QOS issues, especially in urban environments. If you are operating on "grey market" system there is the constant risk that the circuit will be shut down by Telmex. These types of QOS issues often preclude carriers and large enterprises from using these services.

CONCLUSION

Effective and efficient communications between the U.S. and Mexico is critical for economic and social reasons. This niche telecommunication market is highly regulated by both countries using two very separate legal frameworks. XC Networks has developed an extensive real world working knowledge of this complex system to solve cross border communications for our customers.