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*Opportunities for Canadian Companies on the
Chilean Telecommunications Market*

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Embassy of Canada in Chile

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Summary

Chile, with its highly educated population, innate entrepreneurial spirit in its private and public sectors and liberal economic policies, has achieved an enviable position among the countries of Latin America. Over the last ten years, its economy has posted the region's most spectacular rate of growth.

This economic growth has influenced the pace of business in the country. Needs by individuals, business firms and government organizations for modern, efficient communications systems and equipment have driven the telecommunications sector, which grew by 600% between 1977 and 1994. The importance of this sector increased after the liberalization of the industry resulting from Law 3A, enacted in March 1994.

However, the industry's various subsectors have not yet matured and display some shortcomings with regard to regional coverage which will require time to adjust. The ratio of telephones to population is still too low (14.32 lines for every 100 Chileans) compared with the developed countries and there is a major difference in the ratio between the urban centres and the regions. The Santiago metropolitan area has always enjoyed a monopoly over the other regions with regard to installation of telephone lines, since most business firms are located there. It is therefore not surprising to find that most of the planned investments in the industry up to the year 2000 will be made in that city.

The same applies to the cellular sector, whose ratio is only 1% and the cable sector, which covers 11% of the total market (estimated at 3.4 million households) and 30% of the potential market (currently 1.3 million). Despite these low penetration rates, prospects for growth are positive; the cellular growth rate is estimated at 30% per year and the cable ratio will reach 50% by the end of the century.

As regards specialized communications equipment like ATM, the Internet and EDI, the sector is experiencing a remarkable boom. Growth rates of 20% a month have been recorded in these sectors, which are important for improving the quality of communications in business firms, especially for companies with dealings abroad.

Chile imports all its required telecommunications equipment, mainly from Canada, the United States and Japan. Although there are no local manufacturers, foreign companies make agreements with local companies to represent them on the Chilean market. Other companies, such as BellSouth, have preferred to establish themselves fully in the market or set up joint ventures with local firms, as in the case of Motorola and SouthWestern Bell.

The Canadian companies that supply equipment and services to the telecommunications industry are making their presence increasingly felt on the Chilean market. The most promising areas are rural telephone service, interactive television, satellite (wireless) television, PCS, and planning, design and engineering of (cellular and telephone) networks. As regards products, the most promising areas are digital (cellular) equipment, decoders (interactive television), dish antennas

and satellites, telephone exchanges and equipment and equipment to switch and transfer data, voice and images (ATM, Internet and EDI networks).

To establish successfully in Chile, Canadian companies must achieve a local presence by forming a strategic partnership, obtaining the services of a representative or opening an office in the country. Penetrating this market requires frequent contacts with the major buyers, aggressive marketing and a clear commitment. Contacts and familiarity are essential when equipment and services are offered under contract, and customers must have an assurance that the supplier firmly intends to provide after-sales service and supply the required spare parts and equipment.

1-Introduction

Chile is currently growing at a fast rate. After 17 years of a military dictatorship which laid the foundations for strong economic and social infrastructures, the Chilean economy was able to survive the experience of massive privatization of public enterprises beginning in 1990. As a result of the new liberal policies implemented by the Aylwin and Frei governments and the massive investments resulting from privatization proceeds, the Chilean economy was able to post record growth rates for several consecutive years.

This growth, combined with opening of the Chilean market to foreign investment, has driven demand by certain economic sectors, resulting in an acceleration in the pace of business and a higher standard of living for Chileans. These sectors include telecommunications. Many business opportunities exist for Canadian firms. Canada has a high world reputation for its telecommunications expertise and an attack on the Chilean market would represent an attractive opportunity.

1.1 Economic Overview

1995 was another year of strong economic growth after a minor slackening of the pace during the two previous years: 8.5% in 1995, compared with 4.2% and 6.3% in 1994 and 1993 respectively. Chile thus posted the strongest annual growth rate of the Latin American countries, ahead of Peru (7%) and Colombia (5%). Argentina and Mexico posted negative growth of -2.5% and -5% respectively. Projections for 1996 remain positive with growth of 7% projected by the Central Bank of Chile. In 1995, per capita GDP was US\$4,700.

The current unemployment rate is 4.9%, but it is considered that this does not represent reality, since about 25% of the population is underemployed with a wage inadequate to cover essential needs. The inflation rate continues to fall and was 8.1% in 1995, compared with 8.9% in 1994 and 12.3% in 1993.

1.1.1 Exports

Exports totalled US\$16,039 billion in 1995, an increase of 38% over 1994. Imports also increased in 1995 (35%), but the trade balance remained positive and almost doubled in 1995. The main destinations for exports are Japan with 18% of the total, followed by the United States (14.8%), the United Kingdom (6.7%), Brazil (6.7%) and South Korea (5.6%). Of imports, 23.8% are from the United States, 8.7% from Argentina, 7.5% from Brazil, 6.4% from Japan and 4.9% from Germany. By region, Asia is the major export market for Chilean products with 35% of exports, followed by the European Community (28.7%), Latin America (19.2%) and North America (15.4%).

In 1995, Canada exported products totalling more than CDN\$368 million to Chile, while imports from Chile were CDN\$279 million. Canada therefore had a positive trade balance with Chile in 1995, which has been the case since 1993 (in that year the positive trade balance was

CDN\$3.6 million and in 1994 it was CDN\$75.3 million). Canada exports mainly wheat, industrial machinery, telecommunications and computer equipment and mining equipment. Imports consist mainly of fresh grapes, other fruit, wine, copper concentrate and seafood.

As a result of its mineral wealth, copper makes up a major proportion of Chilean exports. The government is seeking to diversify the export structure by encouraging exports by other economic sectors. Thus, in 1995, copper exports made up 35.6% of the total, whereas in 1990 they were 45.5%.

The Chilean economy basically consists of 10 major sectors, although the government is attempting to create an even more diversified economy. The contribution of each of these sectors to GDP in 1995 was as follows:

<i>Fisheries</i>	5.8%
<i>Agriculture, Silviculture</i>	6.9%
<i>Mining</i>	4.9%
<i>Manufacturing Industry</i>	6.1%
<i>Electricity, Gas and Water</i>	8.8%
<i>Construction</i>	9.2%
<i>Commercial and Hotel</i>	10.6%
<i>Transportation and Communications</i>	11.1%
<i>Financial Services</i>	7.3%
<i>Personal Services</i>	2.3%
<i>Other</i>	27%

Source: Central Bank

1.1.2 Government Finance

The government's financial situation is generally good. Although Chile has amassed an external debt totalling US\$21 billion (about 35% of GDP), it is anticipated that this debt will decline beginning in 1996 as a result of a government plan to pay down the principal. In addition, Chile and Colombia are the only Latin American countries with no deficit. The Colombian and Chilean government surpluses represent 1.5% and 4.3% of GDP respectively.

Major Projections for 1996

1-GDP (growth rate)	7.0%
2-Inflation rate	6.5%
3-Trade balance	US\$900 million

Source: Central Bank

1.2 Telecommunications Sector

The Chilean telecommunications sector is currently undergoing rapid development. A number of companies are competing to secure the largest market shares in the industry's various subsectors (local, long distance and cellular telephone services, cable and other subsectors). There have been so many franchise applications from local and foreign companies to provide services after deregulation that the Chilean telecommunications sector is now considered saturated.

According to a study by CTC (Compañía de Telecomunicaciones de Chile), the GDP allocable to the telecommunications sector grew by 600% between 1977 and 1994. During 1994, a record year for the sector, it represented 2.2% of the country's total GDP. The sector grew by 13%, while the economy as a whole grew by only 4.2%.

Investment over the last five years totalled US\$2.5 billion and it is estimated that the various companies will invest the same amount again by the year 2000. Despite the large investment so far, much remains to be done to develop the network and extend it to every region of the country. This may be the explanation for the large number of firms seeking to enter the market, since there is still a potential to make profits as long as the sector is not completely saturated.

1.2.1 Market Size

As regards market size, the Chilean telecommunications market is still considered small. About 1.8 million telephone lines have been installed. In 1995, long distance calls totalled about 1.8 billion minutes and overseas calls 129 million minutes. By comparison, Chile has an average of 14.32 telephone lines per 100 population, whereas the equivalent ratio in the United States is 58 (the average for Latin America is 11 lines per 100 population). There are undoubtedly regional differences: the telephone line penetration rate is higher in urban communities (28% of households) than in rural communities (only 1.8% of households).

1.2.2 Cellular Market

The cellular telephone service penetration rate is 1% (1 telephone line per 100 population), with about 160,000 subscribers. Chile ranks first in Latin America together with Mexico as regards the penetration rate. In numbers of subscribers, Brazil ranks first with 580,000, followed by Mexico (475,000), Venezuela (315,000) and Argentina (220,000). On the world scale, Sweden ranks first with 8.3 lines per 100 population, followed by Norway with 7.8 lines and Hong Kong and the United States with 4.5 lines.

1.2.3 Cable Market

The cable sector is new in Chile. Service is currently concentrated in the large urban centres and mainly in Santiago. As of the end of 1995 there were 389,000 cable customers in a total market

of 3.4 million households, representing a penetration rate of 11% (with most customers located in Santiago).

The conclusion that can be drawn from the foregoing is that the Chilean telecommunications market is in a growth phase. The market is characterized by fierce competition. A large investment is still required to develop the various services in order to raise the Chilean telecommunications sector to a level comparable with that of the developed countries.

2. Profile of Sectors and Opportunities

Following deregulation of the telecommunications sector during the second quarter of 1994, a number of companies submitted franchise applications to operate in the industry's various subsectors (local telephone service, national and international long distance telephone service, cellular telephone service, business telephone service and others). The Chilean market is now considered one of the most competitive on earth.

Seven companies currently provide basic (local) telephone service in franchise areas allocated to each company. Long distance telephone service is provided by 11 companies. In the cellular subsector 4 companies are competing to secure the best position, while cable service is provided by 3 major companies. Three of these firms participate in almost all the industry's subsectors: CTC (Compañía de telecomunicaciones de Chile), Entel and VTR SA.

Compañía de Telecomunicaciones de Chile (CTC)

CTC, the largest communications company in Chile, is 48% controlled by Telefonica de España. It is responsible for 80% of the investments in the sector and contributes approximately 62% to sectoral GDP. In 1995, the company posted a profit of 109 billion Chilean pesos (about US\$360 million) on total sales of 421.6 billion Chilean pesos. It controls 95% of the country's telephone lines and has investment plans to double the ratio of telephones to population by the year 2000 and provide PCS (Personal Communications Service), multimedia service and other services. With deregulation, the company lost its monopoly in the local telephone market.

CTC operates basic and long distance telephone service through its affiliate CTC Mundo, cellular service through its affiliate CTC Celular and also controls 40% of the new Intercom-Metropolis cable company, the result of a merger of Intercom SA, owned 80% by CTC, and Metropolis, owned by Cordillera Comunicaciones.

Empresa Nacional de Telecomunicaciones (Entel)

Entel is the second largest company. Very recently, on January 28, 1996, the Italian telecommunications company Stet Internacional acquired 16% of the Company's shares. Chilquinta, a Chilean electricity company, and the Korean firm Samsung control 17% and 12.5% respectively. Entel is active in every sector except the cable market. This company too lost its monopoly in the long distance market with deregulation. Its net earnings were only

10 billion Chilean pesos (US\$25 million) in 1995 on total sales of 114.2 billion pesos, the result of a positioning adjustment to meet the competition. The company's future investment plans relate essentially to the local telephone service sector and PCS.

Entel provides local telephone service through its affiliate Entel Telefonía Local SA and cellular service through Telecom; it owns 33% of this company's shares, with the rest in the hands of the American company Motorola.

VTR SA

VTR SA is 50.7% controlled by the Luksic Group and 40% by SouthWestern Bell. It has four telecommunications affiliates: VTR Telecomunicaciones for provision of telephone services, CNT Telefonía Del Sur for local telephone service, VTR Celular for cellular service and VTR Telecable (VTR-Cablexpress) for cable. The company's future investment plans are concentrated on private television (cable), cellular service and PCS.

2.1 Local Telephone Service

2.1.1 CTC

As already indicated, the local telephone service monopoly was in the hands of CTC before deregulation. During that period, CTC was responsible for installing telephone lines throughout the country and for providing local telephone service. After liberalization and despite the fact that there are now six other companies with franchises to provide local telephone service in various regions of the country, **CTC controls 95%** of the lines and still has a substantial market share despite the sudden losses experienced over the last two years.

The CTC network covers 80% of the national territory, in which 92% of the population lives. In 1993, the company completed full digitization of its network, which makes it one of the most modern in the world. CTC invested US\$ 2.66 billion (an average of US\$445 million per year) to increase the number of telephone lines from 645,863 in 1989 to 1,674,365 in 1995.

The company's goal is to maximize telephone coverage in the country and thereby increase the ratio of phones to population. The investment plan developed for the period 1996-2000 reflects this objective. Although requirements for telephone lines for this period were estimated at 600,000, the new plan projects the installation of 1.3 million lines, which will require an average annual investment of US\$200 million. This new estimate was based on positive projections of economic growth and housing starts.

Thus, by the year 2000, CTC will have a network of **3 million lines**, compared with a market potential of 3.4 million (the number of households) for total coverage. With this plan, the company will increase the ratio of phones to population from 14.32 lines for every 100 people to **21.7 lines** in the year 2000, or 1 line for every five people (at present, only 50% of Chilean households have a line and this rate will rise to 90% by the end of the century). Total

requirements have been estimated at 1.8 million additional lines. This represents a market of about **US\$2.1 billion**, given that it costs about US\$1,200 to install a telephone line. It is interesting to note here that local telephone service accounts for 63% of CTC's total sales.

The other six companies are completing the work in the regions where this is not possible for CTC. They may either agree with CTC to interconnect their networks or build their own network, which may take longer.

2.1.2 Entel Telefonía Local

Three companies hold franchises to operate solely in the Santiago metropolitan region. The first is Entel Telefonía Local SA, an affiliate of Entel, which began operations on January 3, 1996, after signing an agreement with CTC to interconnect its public network. It will provide service in the Las Condes, Vitacura, Providencia and Santiago Centro districts. In its initial plan, the company intends to attack the residential sector, followed by the business sector. For 1996 and 1997, Entel is planning to connect 18,000 and 24,000 lines respectively and hopes to have 200,000 customers by the year 2000. Its goal is to attain a 13% market share in the capital in the medium term, in return for a total investment of US\$30 million. There are currently 3,500 lines in operation.

In February, the company applied for another franchise for complete coverage of the metropolitan region beginning in August 1996. It will apply for a further franchise in March or April to provide service in the other regions of the country.

2.1.3 Telefonía Andina

The second company is Telefonía Andina, a strategic alliance of Télex-Chile and Comunicaciones Capitulo SA (Teleductos). This company has a franchise to operate in 35 Santiago region districts. Andina is planning to install 200,000 lines by the year 2001 for a total investment of US\$ 200 million, which may gain it the position of second largest local telephone service provider after CTC.

2.1.4 Telefonía Manquehue

The third company is Telefonía Manquehue. This company will expand its operations in the Santiago region in 1996. It has already applied for a franchise to expand its service to nine other districts in the region. Manquehue currently has 25,000 lines in service and its potential market is 75,000 lines. After the service expansion, the company will be in a position to connect 150,000 lines.

2.1.5 CMET

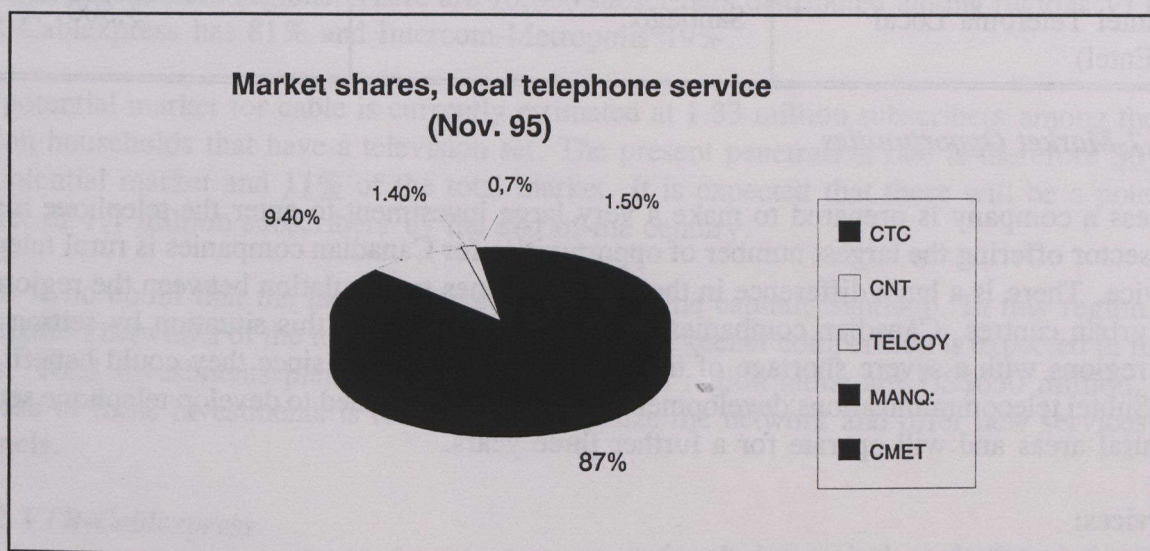
The CMET company operates in the Santiago region but also in regions IV, V and VI. At a later date, CMET will apply for a franchise for region VIII. The company hopes to have 150,000

lines in operation during 1996-97 and reach 500,000 in the year 2000. The company will invest US\$75 million in 1996 and US\$350 million in the year 2000.

2.1.6 CNT Telefonica Del Sur and Telcoy

Last, CNT Telefonica Del Sur and Telcoy, affiliates of VTR Comunicaciones SA, operate basic telephone service in southern Chile. CNT operates in regions X and XI and Telcoy in region XII. CNT is currently extending its coverage. The area of expansion corresponds with regions VIII and IX, which include the cities of Temuco, Concepcion, Chillan and others.

The company will invest US\$300 million by the year 2000 to install 370,000 additional telephone lines. It is planning to reach 3 million locations in its operating area and hopes to have a national market share of between 20% and 25%. The planned expansion area is considered attractive since CTC's telephone coverage is not yet adequate. Furthermore, coverage is not yet complete in its current operating area. The region has a population of 1.03 million and a ratio of phones to population of 7.2 lines per 100, whereas the average in urban areas is 11 and the national average is 14.32 lines per 100 people.



At the end of 1995, the company had 75,000 lines in operation and was planning 20,000 additional lines for 1996. The goal is to install 110,000 lines in regions X and XI by 1998 with a total investment of US\$40 million.

CNT recently applied for a franchise to operate local telephone service in the metropolitan region and region V. The franchise area in Santiago will cover 24 districts with a planned capacity of 145,000 lines. In region V the coverage includes Viña Del Mar and Valparaiso with a capacity of 35,000 lines.

Company	Operating Area	Number of Lines
CTC	Entire country	1,674,365
CNT (VTR)	Regions X, XI and recently V, VIII, IX and Santiago	75,000
Telcoy (VTR)	Region XII	10,000
CMET	Santiago, IV, V, VI and later VIII	60,000
Manquehue	Santiago	25,000
Telefonia Andina	Santiago	-
Entel Telefonía Local (Entel)	Santiago	3,500

2.1.7 Market Opportunities

Unless a company is prepared to make a very large investment to enter the telephone market, the sector offering the largest number of opportunities for Canadian companies is rural telephone service. There is a huge difference in the ratio of phones to population between the regions and the urban centres. Canadian companies could take advantage of this situation by setting up in the regions with a severe shortage of telephone lines, especially since they could benefit from the Subtel telecommunications development fund which is intended to develop telephone services in rural areas and will operate for a further three years.

Services:

- network installation, design and planning;
- network digitization;
- development project engineering;
- planning and design consulting and training services for managers and firms;

Products:

- public telephones and telephone central offices;
- telephone sets and cables;
- call management and transfer devices and systems;
- switching and voice and data transmission improvement equipment;

- stand-alone or built-in telephone answering machines and the latest telephone service technology: conferencing, call waiting, last number dialled, etc.;
- PABX and multiline telephones for companies.

2.2 Cable Television Service

The Chilean cable market is the fourth most developed market in Latin America after Argentina, Mexico and Brazil. This is an attractive market, since there are no restrictions on investment and the technological level is high. In 1996, the market will be more competitive and more highly developed with the arrival of satellite television.

2.2.1 Market Size

At the end of 1995, there were about 400,000 cable customers in the country. There are 96,000 subscribers in the northern area (distributed among regions I to V); UIH (United International Holding, an American multinational), which controls CableVision, has 81% of the market and Intercom-Metropolis has 19%. In the central area and the metropolitan region there are 220,000 subscribers. VTR-Cablexpress has 38% of the market and Intercom-Metropolis 62%. Penetration is low in the southern regions. There are 70,000 subscribers distributed among regions VI to X. VTR-Cablexpress has 81% and Intercom-Metropolis 19%.

The potential market for cable is currently estimated at 1.33 million subscribers among the 3.4 million households that have a television set. The present penetration rate is therefore 30% of the potential market and 11% of the total market. It is expected that there will be a potential market of 1.7 million subscribers by the end of the century.

There is no doubt that the largest market in Chile is the capital, Santiago. In this region, the distribution networks of the major suppliers overlap and keener competition is expected in future years. Total investments planned for the metropolitan region alone are US\$650 million. The purpose of these investments is to extend and digitize the network and offer new services and channels.

2.2.2 VTR-Cablexpress

VTR-Cablexpress, an affiliate of VTR for cable service delivery, is the outcome of a merger of VTR Telecable and Cablexpress and has 42% of the market in its franchise area (the Santiago region and southern Chile). Another merger plan is currently under way with UIH (United International Holding), which owns CableVision, whose franchise covers the northern part of the country from Viña del Mar to Arica.

An investment of US\$72 million is planned to complete the merger. The merged entity will have about 160,000 subscribers in 23 cities, representing 90% of the total population. The VTR-Cablexpress system will therefore be the largest in the country. The company is hoping to have 600,000 subscribers by the end of 1996. Since the optical fibre network is used to

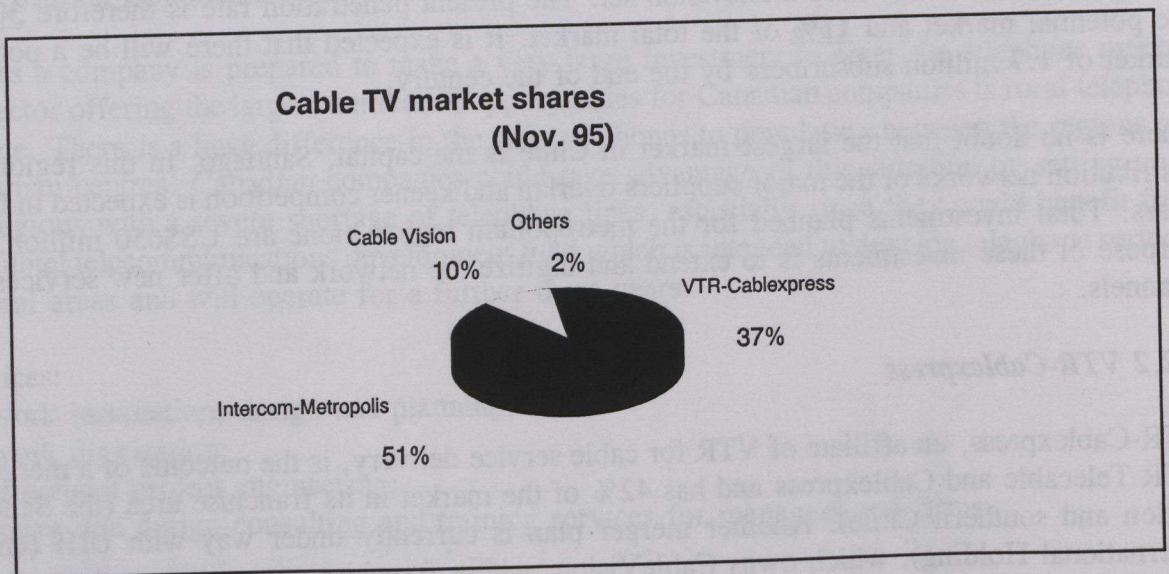
deliver telephone and cable service simultaneously, VTR can use the UIH network to expand its telephone service in northern Chile.

The company has also announced signature of a contract with Galaxy Latin America to deliver television by satellite (the Directv project). VTR will therefore set up a new company, VTR Galaxy Chile, with an investment of US\$500 million. With this investment, it is hoped to cover the needs of 5 million subscribers by the year 2000. Galaxy will transmit 114 television channels and 60 music channels split between two digital video signals with a 425-line picture resolution.

2.2.3 Intercom-Metropolis

CTC recently merged the operations of its Intercom affiliate, in which it had 80% control, with Metropolis of the Cordillera Comunicaciones Group. Under the terms of the agreement, the Cordillera Comunicaciones Group will control 60% of the new Intercom-Metropolis company. As a result of this business association, the latter company will control 51% of the market in the capital.

In its plans for 1996, the company is projecting an investment of about US\$605 million to connect 1 million households to cable by the year 2000. In addition, its plans to develop the television market include introduction of multimedia services in 1996. Services like pay-per-view movies, interactive games, distance learning and home shopping will be available on a single television set.



Service delivery at the national level will be facilitated by two basic factors: the first is the extensive optical fibre network owned by CTC, now covering the major Chilean cities (total national coverage is planned for March 1996 with a 4,000 km network); and the association with

Metropolis which will contribute expertise in television and additional coverage through its subscriber network.

The plan is to begin with Premium channels (scrambled channels with a charge on top of the charge for basic service) and Pay-Per-View, which the company may implement within two or three years, since on the technical level these services require only shortwave frequencies. Pay-per-view movies may be included in the service at a later date.

During the first half of 1996, the company hopes to conduct a pilot trial to determine whether the network meets all the required technical specifications for proper operation of the system, but also to test it from the business point of view: determine the demand structure, level of acceptance of the service by customers and their willingness to pay.

In view of the country's socio-economic diversity, two sectors of the capital will be selected. About 400 selected households in these two sectors will be connected to the system. The pilot trial is divided into five phases over a three-year period. In 1996 the offering will include Pay-Per-View, Pay-TV, segmented basic cable (a group of channels targeted at different socio-economic groups) and also telephone service on the same network. Phase Two will be implemented in 1997 with distance education, video games and digital music, while Phase Three will include interactive games and Near Video on Demand (rotating movies). Telemedicine, Video on Demand, Home Shopping and high-definition television will come later during Phase Four of the project, which will be the most comprehensive in terms of technological development.

2.2.4 Market Opportunities

Canadians have undeniable telecommunications expertise. Since the Chilean cable market is not yet fully developed, Canadian companies could participate in delivering basic service and so provide the latest technologies implemented in Canada.

Services:

- delivery of interactive television service, cable television and multimedia (Pay-Per-View movies, Home Shopping, etc.);
- installation of satellite (wireless) television;
- planning and design of optical fibre networks for simultaneous cable and telephone service;
- consulting services for interactive television, multimedia and cable television;
- program production services for interactive television and multimedia;

Products:

- decoders, satellites and dish antenna;
- programs for interactive television and multimedia;
- tools, equipment and machinery for cable television, interactive television and multimedia transmission and reception;
- optical fibre and microwave cable.

2.3 Cellular Telephone Service

The cellular market in Chile, which started up in 1989, is not well developed as yet. At the end of 1995, there were 160,000 subscribers, representing a penetration rate of slightly more than 1% of the population. However, during the last three months of 1995 there were many promotional offers by suppliers to expand the market and meet the requirements of customers, who are mainly business people. There are many discount plans.

The current regulations applicable to the cellular market stipulate that only two operators can provide service in the same franchise area. Thus, CTC Celular has a franchise for the metropolitan region and regions V, XI and XII. BellSouth Chile, the Chilean affiliate of the American company BellSouth, has a franchise for Santiago and region V. VTR Celular has rights to provide service in every region except Santiago and region V. Telecom, an association between the American company Motorola (67%) and Entel (33%) provides service in regions I, IV, VI and X.

This campaign is explained by the small difference in the market shares of the companies competing in the same regions and an estimated growth rate of 30% for the sector.

2.3.1 CTC Celular

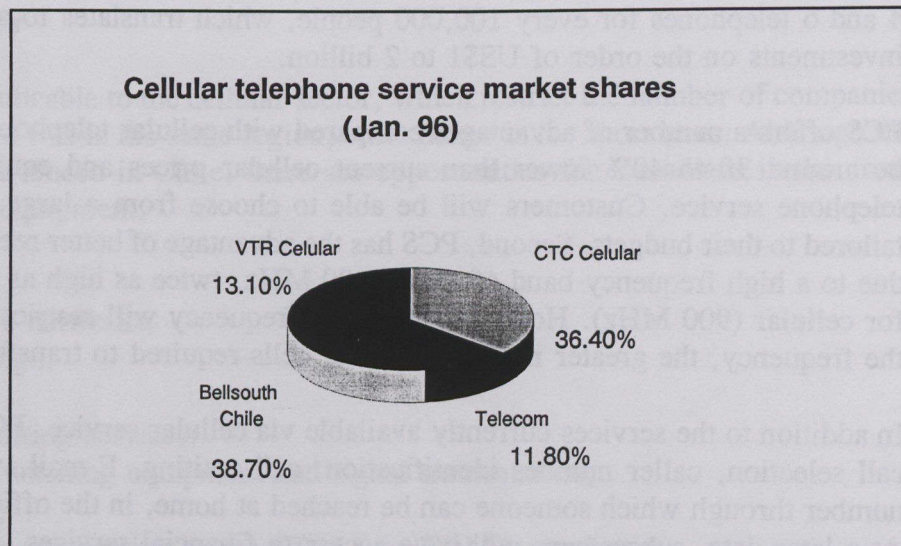
CTC Celular is the most innovative company in the sector. It currently has some 54,000 subscribers, giving it a national market share of 36.4%. As a result of complete digitization of its telephone system in 1993 and the current digitization of its cellular network, the company can offer leading-edge services. The current digitization rate of the cellular system is 5% and it is hoped to achieve complete digitization around the end of 1996. It should be noted that digitization does not mean a complete change in technology but rather the securing of a better transmission frequency.

The digitization process will require an investment of US\$40 million. With this investment, CTC Celular will have enhanced capacity to integrate the new subscribers, resulting in expanded service and lower rates.

One of the new services introduced by CTC Celular is SuperTelephone Personnel Mobile (SPM). This service introduces the concept of mobility to the local telephone network by allowing inclusion of a cellular line in the fixed residence line or the company's business line. Customers must lease a cellular phone to get this service. Calls to the residence or business phone will automatically be routed to the cellular phone at no additional cost.

The service works only with calls originating in the Santiago region and region V, which are CTC Celular franchise areas, but calls can be routed to any cellular phone in the country. The company hopes to have 100,000 subscribers to this service by the end of 1996.

BellSouth Chile has services and discount plans based on its customers' needs. For example, the Plan Festivo service is targeted at young cellular users. Telecom and VTR Celular also offer a variety of services. Telecom has the Plan Optimo and Plan Economico services at a low fixed charge and the Plan Ejecutivo Plus plan for business people. VTR Celular has the Plan Minutos Libres and the Plan Emergencia.



2.3.2 PCS

In 1996, Subtel will award the franchises to operate the PCS (Personal Communications Services) system. Although eight companies have submitted tenders, only three franchises will be awarded. CTC and Entel are already well positioned and ready to provide this service. Entel was the first company to submit a tender, and this gives it an advantage over the others, while CTC is relying on its digitized cellular network to get the franchise. (According to the latest information, Entel may sell its share in Telecom to BellSouth Chile if it is awarded a franchise to operate PCS; thus, the BellSouth-Telecom association will allow BellSouth to become the only cellular company to cover the entire country.)

The technology required to operate PCS is practically the same as the technology CTC currently uses for its cellular network, but there will be a requirement for enhanced network development and equipment. An investment of US\$200 million is projected for this purpose. PCS operates through two types of technology: CDMA IS95 and TDMA IS54. T lex-Chile and BellSouth have opted for TDMA, which is supplied by the Swedish company Ericsson. TDMA is operational in Colombia, the United States, New Zealand, Hong Kong and Europe and serves about 12 million customers. Entel has opted for CDMA, which outperforms TDMA by a factor of 10. In July 1993, Entel set up EntelMovil, a strategic alliance with Qualcomm Inc. of San Diego, USA, to develop the personal telephone market.

There is no doubt that PCS will have an impact on the cellular sector. During the initial months after introduction of the system, a price war is anticipated similar to the one that occurred on introduction of the multicarrier system. At a later stage, the critical factors will be service quality and network coverage. Subtel estimates that until the year 2000, demand will be between

4 and 6 telephones for every 100,000 people, which translates to a total of 600,000 lines and investments on the order of US\$1 to 2 billion.

PCS offers a number of advantages compared with cellular telephone service. First, prices will be around 30 to 40% lower than current cellular prices and equivalent to the cost of local telephone service. Customers will be able to choose from a large number of service options tailored to their budgets. Second, PCS has the advantage of better reception than cellular phones, due to a high frequency band of 1700-2200 MHz, twice as high as the present frequency band for cellular (900 MHz). However, this high frequency will restrict coverage, since the higher the frequency, the greater is the number of cells required to transfer calls.

In addition to the services currently available via cellular service, PCS will allow, for example, call selection, caller number identification, call waiting, E-mail, voice mail, and a personal number through which someone can be reached at home, in the office or on his or her cellular. At a later date, subscribers will have access to financial services, home shopping, interactive video and data transmission.

2.3.3 Problems with PCS

In early December 1995, Subtel presented the "PCS White Paper" to the companies interested in providing PCS service. This document contained the general standards for the service and the conditions governing application for a franchise. On January 17, 1996, VTR Celular filed an economic protection claim in the courts to the effect that the conditions for holding frequencies were not clearly stated. The court then granted a non-innovation order in the telecommunications field, and the other cellular companies -- CTC Celular, BellSouth and Telecom -- supported the VTR action.

However, Télex-Chile and Transfer, two companies that are submitting applications to provide PCS service, petitioned the courts to have the non-innovation order lifted and for the franchise award process to resume (offers were to be received beginning on March 1 and final award of franchises was to take place no later than June 1).

VTR explained its claim by stating that the rules concerning investments were not clear, especially with regard to holding frequencies currently in the hands of the Armed Forces. Whereas Subtel claims that total investments will be between US\$ 10 and 90 million, VTR feels that the Subtel estimates are preventing it from completing the calculations required to make an offer, especially since it is not yet certain exactly when the Armed Forces will make the frequencies available. In addition, the telephone companies are not willing to suffer once again the huge revenue losses they experienced after deregulation of the telecommunications sector in 1994, in addition to possible losses of the investments they have made so far in the cellular sector.

2.3.4 Market Opportunities

The current regulations applicable to the cellular sector, which restrict the number of companies providing cellular service to two in the same region, will change in the short term. Although the sector is technologically advanced in Chile, there are opportunities for Canadians in the areas of supply of material and equipment.

Services:

- installation of optical fibre networks;
- network planning and design;
- network digitization;
- design and planning consulting services;
- installation of satellites, switching equipment and signal transmission;
- installation of trunk lines;
- supply of PCS technology conforming to the CDMA or TDMA standards;
- PCS technology consulting services;

Products:

- cellular phones;
- antennas, voice channels, trunk lines, microwave cable networks;
- digital and other equipment for PCS technology;
- satellite equipment.

2.4 Long Distance Telephone Service

During the first quarter of 1994, Subtel introduced a new law (Law 3A) which liberalized the telecommunications industry and allowed installation of a system known as the multicarrier system. Chile is the first Latin American country to install this system and the fourth in the world after the United States, New Zealand and England.

With this new system, long distance service users can select any carrier by dialling its (3-digit) code to access the line, or can enter into a contract with it. Contracts are normally for a minimum period of two months and must be made with a single carrier. The only benefit associated with a contract with a carrier is the savings achieved. A user will pay less per minute if he has a contract with a certain carrier than if he dials the carrier's code on a casual basis. It should be noted that under the Law, companies providing local telephone service are entitled to operate long distance telephone service and vice versa (as in the case of CTC and Entel, for example).

2.4.1 Impacts of Multicarrier

Service introduction of this system lead to intensive price competition, especially during the last quarter of 1994. Price competition is continuing but to a lesser degree. Because the system is still recent and new companies are continuing to enter the market, the structure of this sector

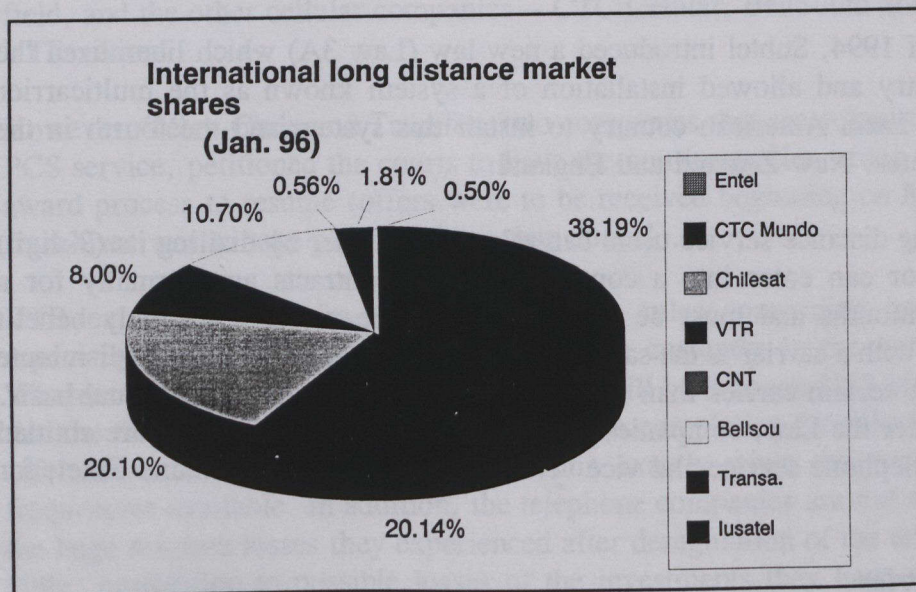
is not yet fully determined. Thus, every price change and promotion by one company will induce the others to follow, with the goal of securing a better position in the market.

Price competition impacted negatively on the financial results of the various companies operating in the sector in 1995. Profits fell steeply by comparison with 1994. This was to be expected, since executives have predicted a two to three year adjustment period to meet competition in the sector. Thus, it is projected that telephone rates, which fell constantly between 1994 and 1995, will rise in 1996, as a result of possible market stabilization.

2.4.2 Market Structure

Currently, 11 companies have franchises to operate long distance telephone service. Of these, 8 are operating and 3 will begin to provide service during 1996.

<p>In Service* (the digits represent the codes of each carrier)</p>	<p>Entel(123), CTC Mundo(188), Chilesat(171), VTR(120), BellSouth(181), Iusatel(155), CNT Carrier(121) and Transam(113).</p>
<p>Will begin operations in 1996</p>	<p>Hewster, Visat and Etse (affiliate of CMET).</p>



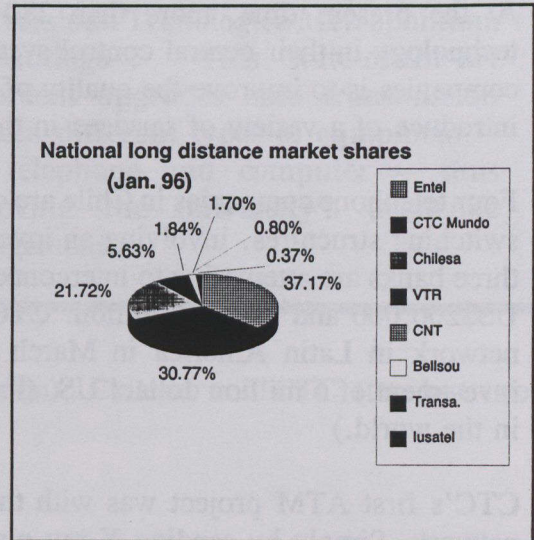
Companies that wish to operate long distance telephone service must lease CTC lines to access the network. CTC controls almost 95% of the country's telephone lines and leasing represents an access charge for the other companies. In order to increase their market shares, firms typically resort to aggressive advertising campaigns to publicize at least the code for access to their service.

Thus, total advertising costs in 1995 were US\$77 million. The company that spent most was Chilesat (an affiliate of T lex-Chile) with a total of US\$25 million, or US\$1.2 million for each market share point (Chilesat has a 21.72% market share). VTR comes second, with US\$19

million in advertising costs and US\$3.17 million for each point. Entel spent US\$13.9 million in 1995, or US\$265,000 for each point.

3-Specialized Services

In addition to the services offered by the telephone companies to users, other types of services are targeted specifically at businesses. Services like ATM, the Internet, PHS and other services are some of the latest technological innovations of this century. In general, these services will contribute to the pace of business and upgrade connections between the various branches of a company, thus improving communications. The consistent growth of the Chilean economy since 1996 and the innovative spirit of the Chilean business community have driven demand for these services. There are many opportunities for Canadian firms in the business services sector of the Chilean telecommunications market.



It should be noted here that in Chile there is only one manufacturer of telephone equipment: CTC. But this company adapts models rather than manufactures them. Thus, most equipment and technologies used to provide services is imported, mainly from Japan, the United States and Canada. These services and equipment are available through representatives of foreign companies in Chile.

3.1 ATM (Asynchronous Transfer Mode)

This is a high technology system for high speed transmission and switching of data, video and voice. For example, with this technology, data can be sent at a rate of 155 megabytes per second. The technology is intended essentially for large companies such as financial concerns, banks and telephone companies.

With this technology, development of multimedia applied to a series of large local networks is not only possible but also advantageous in cost-benefit terms, since ATM is the only way right now to benefit from the modern software platforms and systems currently under development. The concept was to introduce a form of transmission allowing traffic integrating all types of media simultaneously over the same network. Thus, ATM technology today represents an important factor for companies interested in

Newbridge Networks Corp. controls 50% of the world ATM market. Through its representative Coasin, it installed the first public ATM network in Latin America for CTC.

modernizing and optimizing their transmission and digital information processing structures from and to different sources -- databases, photographic, audio or video databases, located in or outside the firm.

At the present time, more than 280 telephone companies worldwide have installed ATM technology in their central control systems. The purpose of using this technology in telephone companies is to improve the quality of voice and data communications and effectiveness and to introduce of a variety of services in the near future.

Four telephone companies in Chile are currently experimenting with ATM in their internal signal switching structures, involving an investment of between US\$1 and US\$3 million. In addition, three banks are attempting to interconnect their local networks through an investment of between US\$200,000 and US\$1.5 million. CTC is planning to bring into service the first public ATM network in Latin America in March 1996 by installing 44 stations in Santiago for a total investment of 6 million dollars US. (It should be noted that there are only three ATM networks in the world.)

CTC's first ATM project was with the Catholic University of Chile through its telemedicine network. Simply by sending X-ray plates, medical histories and medical examinations over a high-capacity multimedia network, specialists in Chile, Brazil (in the Sotero de Rio hospital) and Argentina have been able to diagnose patients and simultaneously discuss the results of medical analyses through video conferencing.

It is anticipated that beginning next year the telephone companies will include ATM technology in their range of telephone services. This will facilitate introduction of new services like private multimedia networks for large companies, enhanced development of the Internet and a detection system to signal when and where someone has been connected to or disconnected from the network.

3.2 EDI (Electronic Data Interchange)

This telecommunications sector is currently growing in Chile. There are about 5,000 EDI users and 60,000 automatic teller machines in operation in the country; worldwide, there are 4 million subscribers reachable via a computer, a telephone, a fax machine or telex machine. About 10,000 firms have an EDI account to link their communications networks and it is estimated that this number will double in the next two years.

The system began to operate in Chile in 1992 and experimented with a number of innovations. This service is similar to E-mail but with a standardized format. Business documents for transmission have a predetermined format based on the Edifact international standard: purchase orders, invoices, bank credit notes, etc. For example, it is now possible to transmit directly by EDI business quotations,² health plan contributions and VAT tax accounts, which previously required several hours of transmission time. In addition, using EDI can cut the administrative costs of a company by up to 70% and promote international trade, since 60% of business

activities are conducted with foreign entities, and EDI will facilitate links with foreign companies.

There are six suppliers of this service in Chile: AT&T, the American telecommunications multinational which provides the service through its affiliate AT&T EasyLink Services (with 50% of the world market), represented in Chile by EasyMail Chile; IBM Global Network (which, like AT&T, has international coverage); Edibank; Transaxion (a joint undertaking by Entel, Sofofa, the Santiago chamber of commerce and the supermarkets' association); Chilesat and CTC (the last two companies began to provide service during 1995).

In 1995, Northern Telecom installed two digital telephone central offices of the Meridian 1 Opcion 11 type in the "Universidad Tecnologica Metropolitana de Santiago". This state-of-the-art equipment upgrades data transmission between different types of equipment -- fax, telephone and computer -- thus improving the university's academic management.

3.3 Pager Service

The pager service market in Chile grew at a dizzying pace in 1995. Whereas the experts were predicting a 50% growth rate, the actual rate was 100% over 1994. The number of individuals with this service increased from 25,000 in 1994 to just over 50,000 at the end of 1995. In Latin America as a whole, the growth rate was also high at 45%. In ranking, Brazil comes first with 300,000 subscribers and Chile ranks eighth.

However, the service's penetration rate is still very low when compared with rates in the developed countries. Chile currently has a 0.3% penetration rate, whereas the average rate in the developed countries is 10%. A major difference is that in the developed countries a high proportion of customers of this service are young people. Pager service has the advantage that the same monthly rate is paid regardless of the number of messages received. Future projections indicate that there will be 150,000 subscribers to the service by the year 2000 and a worldwide total of 120 million.

On the Chilean market, Instacom, owned by CTC Comunicaciones Moviles (CTC), holds the majority market share. To meet the strong growth in demand, the company will introduce a program to upgrade transmission offices; as a result, CTC will be the only company with national coverage. Thus, the capacity of the Santiago office will be expanded to include 30,000 additional listings, while the capacity of the Concepcion office will be expanded by 16,000. In addition, Instacom will increase the number of operators assigned to route calls by 30%. Last, the company will begin to distribute free of charge during the first quarter of 1996 a special software program, Global Mail, which will optimize transmission of messages to the pager and will require only a computer and modem.

3.4 Internet

In 1995, Chile's Internet sector experienced monthly growth of 20%. With several service suppliers and many sites on the WWW (World Wide Web), the sector now reaches some 100,000 users and is a new force in the telecommunications market. Experts agree that two factors explain the development of cyberspace in Chile: a strong contribution by the private sector, which has created an extensive, modern infrastructure, and the rate policy based on volume used adopted by Reuna, the main service supplier. Chile and Switzerland are the only two countries in the world to use this form of charge.

Reuna is an abbreviation of Red Universitaria Nacional (national university network), a consortium of 19 public and semi-private universities and Conicyt, the agency operating and managing the main Chilean access to the Internet. The concept was to form a network to allow interconnection among academic staff in the various national universities. As early as 1988, however, Reuna was planning to connect to the Internet, and the major problem was the high cost of the connection, which at that time was US\$12,000 a month for a single line. The connection was finally made on January 2, 1992, after the executives agreed to sell the services commercially to the various interested parties in order to become financially self-sufficient.

The Reuna network is based on three major operating centres, in Santiago, Concepcion and Antofagasta. These three centres concentrate the traffic from points of presence in 11 of the 13 national regions (excluding Puerto Montt and Coyhaique). The Reuna network connects more than half of the 100,000 users (a market share in excess of 50%), who include private and public business organizations, non-government organizations, public and private universities, public libraries, schools and individuals.

As a result of the boom in the Internet sector, Reuna has implemented some measures to meet and take advantage of this growth. For example, Reuna increased its circuit capacity from 56 Kbps (kilobytes per second) to 128 Kbps in February 1994, and again to 512 Kbps in February 1995. The company has also developed an aggressive marketing plan to attract new customers and position Reuna as the best option for both commercial and non-commercial Internet use.

With the highest per capita connection rate in Latin America and a 20% monthly growth rate, Chile leads the countries of the region in the Internet sector. According to the most cautious estimates, there will be almost 1 million users in Chile by the year 2000. Thus, although Reuna is the primary supplier of the service in the country, there will be room for other companies.

Market Opportunities

Services:

- design and installation of ATM, Internet and EDI networks;
- consulting on installation and design of these networks;
- supply of video conferencing and Internet network access services;

Products:

- voice, data and image switching equipment;
- satellites to provide connections between entities using ATM service;
- software required to install and deliver EDI service;

4-Market Access

4.1 Market Penetration Strategies

The favourable economic situation, liberal government telecommunications policies and positive forecasts for the sector open up many business opportunities for Canadian companies. In order to be competitive, they must select the appropriate penetration strategy for the market, such as finding the right representative, providing top quality service, offering competitive financing and participating actively in promotion activities.

Northern Telecom has just signed an agreement with the American company Hewlett Packard to enter the Latin American market with the latest technology.

However, strategies for penetrating the Chilean telecommunications market differ according to the vocation of the Canadian company.

Telephone Companies

Three possible forms of market penetration are open to the telephone companies. The first is full establishment on the market by setting up an affiliate on the same lines as the American company BellSouth. A high degree of risk is associated with this option. A long term commitment must be anticipated in order to eventually profit from installation, substantial investments in infrastructures, marketing and distribution and fierce competition which prevent participants from making high profits and impel them to continually improve their market position. In the long term, however, this option could be advantageous, given the positive projections for the sector. Some restrictions apply; for example, the affiliate's presidents and directors must be Chilean.

The second possibility is a joint venture. This option allows the risk to be shared among the partners and may avoid a long-term commitment. It will be more in the interest of the Canadian company to associate with a Chilean company than with a foreign company, since a national company may have a better knowledge of the Chilean market and its operation.

The third option would be to participate in the management of a Chilean company by purchasing an interest in it. Depending on the percentage of the interest acquired, this is the weakest option for penetration of the market. However, the company could transfer its technology and consider another form of investment later.

Engineering Consulting Firms

Canadian consulting firms should consider three approaches that will allow them to effectively penetrate the Chilean market.

1. The first approach assumes use of a local agent to identify potential projects for the consultant. This is the minimum level of commitment that should be considered if the objective is to penetrate the Chilean market.
2. A company employee should make regular sales trips to Chile to meet with potential customers and support the company's representatives.
3. Since the foreign consultants will be responsible for the process design, and the detailed design work will be done by local consultants, an affiliation or joint venture with a local consulting firm would be an ideal way to serve the market.
4. Given the trend to opt for technical services provided by the vendor, the consultant should consider a joint venture with one or more telecommunications equipment suppliers (if the equipment is not manufactured by the Canadian company).

Equipment Suppliers

1. The supplier should have a local representative or agent with the function of identifying potential sales. The agent will also be responsible for marketing and promoting the Canadian supplier's products.
2. The supplier should have a firm intention to provide after-sales service and supply the required components and spare parts before making business contacts on the market.
3. Company employees should make regular sales trips to Chile, since buyers prefer to deal directly with the supplier whenever possible, but especially for large purchases. Regular contacts will show the Chileans that there is a commitment to support this market.
4. It would be in the supplier's interest to make an alliance with a local company manufacturing components or spare parts for its equipment (if possible). This may be a way to gain a price advantage by using local labour and of demonstrating to potential customers that it has a local operation to produce parts.
5. The company should make efforts to use standard parts and components in its equipment in order to facilitate on-site replacement and maintenance.
6. To improve the sales potential, the supplier should set up operational training programs. It should ensure that the performance claims for its equipment are confirmed by users and that it can meet technical requirements and answer customers' questions.

7. If the company supplies expensive equipment, it should provide financial arrangements for commercial leases or sales of the equipment in Chile. The financial aspects of a purchase are fundamental on such a competitive market.

To successfully establish itself in Chile, the Canadian company should consider a joint venture with a local partner, open an office in the country or have a local agent. Penetrating this market requires frequent contacts with the major buyers, aggressive marketing and a clear commitment. Contacts and familiarity are essential when equipment and services are offered under contract, and customers must have an assurance that they will receive after-sales service.

4.2 Selecting a Business Representative

The engineering consulting firm or supplier should select its business representative with care. Regardless of the role the representative will play, the image he projects on the local market will have a direct impact on the company's image in Chile.

Companies looking for an agent or representative should first contact one of the 12 international trade centres set up in Canada, in order to obtain information on trade fairs and missions to Chile. Participating in a foreign trade fair or a trade mission abroad is an excellent way to meet possible agents. Another possibility would be to contact the Canadian embassy, which will provide a list of potential agents on the Chilean market.

4.3 Business Promotion Possibilities

Interested exporters have an excellent way to penetrate the Chilean market by participating in one of the major Chilean telecommunications business shows like TV Latina, SOFTEL, FISA and EXPOMIN. The Canadian Department of Foreign Affairs and International Trade encourages Canadian companies to participate in these shows and fairs.

TV Latina

TV Latina is organized by AIC Conferences, a private company. This annual show will be held from June 18 to 20, 1996, in the Santiago convention centre. It will include the latest technologies, equipment and services in the international television field. The latest interactive, transmission and digital equipment technologies will also be shown.

SOFTEL

This annual show is organized by the Feria Internacional (international fair) de Santiago. The 1996 fair, the eleventh, will be held from July 9 to 14, when the latest data processing and telecommunications technologies will be exhibited.

FISA (Feria Internacional de Santiago)

FISA is the largest and oldest horizontal fair (exhibiting all kinds of products) in Latin America and attracts more than 700,000 visitors each year from Chile and adjacent countries. More than 40 countries participate annually in this fair which will be held next in October 1996.

EXPOMIN

This biannual fair, the largest Latin American fair in the mining and energy sector, will be held from May 14 to 18, 1996. More than 500 companies in the mining sector and other directly or indirectly associated sectors will participate. Telecommunications equipment plays an important role in mining operations and participation by Canadian companies represents a good opportunity.

4.4 Financing

Financial aspects are vital to close a sale on the Chilean market. Buyers will normally look for the best credit terms available from the suppliers' government.

The largest buyers will be able to approach international banking consortiums directly to obtain financing facilities. Smaller buyers may request a direct credit from suppliers, who may have easier access to preferential conditions.

The Export Development Corporation (EDC) provides financing to support Canadian exports, and export credit insurance is also recommended. Three EDC credit lines have been set up through Banco Sud Americano, Banco O'Higgins and CTC. However, local financing may be preferable, since it is easily available and offered on competitive terms.

The Canadian International Development Agency assists Chile most actively through its Industrial Cooperation Program (ICP). Under the ICP, Chile is a priority market in Latin America, and the Program concentrates its support on technology transfer and joint venture projects. CIDA assistance to formation of new joint ventures has produced excellent results. Many successes have been achieved through CIDA financing for education and training of the personnel of Canadian-Chilean firms.

5. Regulatory Framework

In 1987, Chile became the first Latin American country to privatize telecommunications companies. However, privatization was introduced without adequate regulation and this resulted in legal actions on both sides by the large firms Entel and CTC. After a number of years of disputes and lobbying, the new law was introduced on March 10, 1994. Law 3A is not specific comprehensive legislation as such but an amendment of the General Telecommunications Law passed in 1982, which was amended in 1989, 1990, 1993 and finally in 1994 to introduce the multicarrier system.

Supervision of the Chilean telecommunications sector and implementation of the new law is the responsibility of Subtel (Subsecretaria de Telecomunicaciones). Law 3A contains provisions on franchises and licences, functioning and operation, the telecommunications development fund, rates and market share restrictions for the first four years of the multicarrier system. Since the General Law is lengthy, only the most relevant points in each provision will be mentioned.

5.1 Franchises and Licences

1- Franchises will be awarded for a period of 30 years for public telecommunications and intermediate service companies and are renewable for a similar period.

2- A franchise or licence is not necessary for installation and development of ancillary services.

3- Subtel authorization is required to operate limited telecommunications services (installation, operation and development); this authorization is valid for a 10-year period and is renewable.

4- Franchisees have the right to install and connect lines on streets, plazas, parks and other public property, but only for the specific service to be provided.

Lines to be installed on private property must be certified by both parties under the Common Law. If there is no agreement, Subtel may declare installation of lines an essential service.

5- Franchisees or persons using franchises must be Chilean and must be resident in the country. Presidents, directors and executives must have no criminal record.

5.2 Service Functioning and Operation

1- The public telecommunications services franchisee (in this case, CTC) must set up a multicarrier system allowing the user or subscriber to place his national and international calls with the intermediate services franchisee of his choice. Each service provider can be reached via an access code.

2- Intermediate service providers can issue subscriber contracts if users so wish.

3- Intermediate service providers are responsible for rates and for billing the services provided. However, they can subcontract these functions to the public telecommunications services (PTS) provider.

4- The PTS franchisee must disclose without discrimination to all intermediate services suppliers all information relating to subscribers and the call rate (telephone traffic).

5- Separate companies must be set up to provide long distance intermediate services.

6- Intermediate services providers may set up service centres for long distance calls. Furthermore, the PTS franchisee may provide public telephone service outside its franchise area.

5.3 Telecommunications Development Fund

1- Creation of a telecommunications development fund for a 4-year period in order to increase telephone coverage in rural areas, deprived regions and regions with a low telephone penetration rate.

2- Project proposals must be submitted before September each year.

3- The types of projects accepted are: public telephones and call centres in the regions covered by the companies; for the other regions, the same projects but also installation of residence lines.

5.4 Rates

1- Definitive rates for long distance calls will be determined in accordance with formulas. National long distance rates consist of charges for access to the local network and national long distance rates for the intermediate provider. For international calls, rates consist of access charges, national long distance charges and costs associated with international connections.

2- A maximum rate structure will be adopted and must not be applied on a discriminatory basis.

3- Development costs, long term incremental costs and the rate structure will be calculated by means of a special study at 5-year intervals for each service.

5.5 Market Share Restrictions

1- Restrictions are for a 4-year period for national long distance and for 3 years for international calls.

2- Restrictions are based on a maximum number of billed minutes.

3- Penalties will be assigned if the carrier exceeds its permitted market share of accumulated minutes by 3%.

Finally, it should be noted that there is no specific law governing the cable market, the cellular market or the multimedia market. Thus, there is no standard governing provision of telephone service via cable or any restriction on rates. However, certain CTC executives claim that regulation of the cable sector will be introduced within a few years. However, Subtel executives do not share this view, since they say that their policy will always be to increase competition and allow the market to be regulated by competition.

With regard to PCS, Subtel developed and presented the "PCS White Paper" in early December 1995. This document contains general standards for this service and conditions governing applications to provide service. However, in view of the technical and financial problems of the telephone companies resulting from the rules in the document, it seems likely that some changes will be made to it, especially since the process to award licences has now been postponed (from March 1 to an undetermined date).

6. KEY CONTACTS

6.1 CANADIAN GOVERNMENT DEPARTMENTS AND SERVICES IN CANADA

Department of Foreign Affairs and International Trade (Ottawa)

Department of Foreign Affairs and International Trade (DFAIT) is the Canadian federal government department most directly responsible for trade development. The **InfoCentre** is the first contact point for advice on how to start exporting; it provides information on export-related programs and services; helps find fast answers to export problems; acts as the entry point to DFAIT's trade information network; and can provide interested companies with copies of specialized export publications.

InfoCentre

Tel.: 1-800-267-8376 or (613) 944-4000

Fax: (613) 996-9709

FaxLink: (613) 944-4500

Latin American and Caribbean Trade Division promotes trade with Chile. There are several trade commissioners at the Embassy of Canada in Santiago. Trade Commissioners can provide a range of services including introducing Canadian companies to potential customers in Chile, advising on marketing channels, assisting those wishing to participate in trade fairs, helping identify suitable Chilean firms to act as agents, and compiling credit and business information on potential foreign customers.

Latin America and Caribbean Trade Division Department of Foreign Affairs and International Trade

Lester B. Pearson Building

125 Sussex Drive

Ottawa, Ont. K1A 0G2

Tel.: (613) 996-5546

Fax: (613) 943-8806

International Trade Centres

International Trade Centres have been established across the country as a convenient point of contact to support the exporting efforts of Canadian firms. Co-located with the regional offices of Industry Canada (IC), the centres operate under the guidance of DFAIT and all have resident Trade Commissioners. They help companies determine whether or not they are ready to export; assist firms with marketing research and market planning; provide access to government programs designed to promote exports; and arrange for assistance from the Trade Development Division in Ottawa and trade officers abroad. Contact the International Trade Centre nearest you:

British Columbia:

Scotia Tower

900-650 West Georgia Street

P.O. Box 11610

Vancouver, BC V6B 5H8

Tel.: (604) 666-0434

Fax: (604) 666-8330

Alberta and Northwest Territories:

Canada Place

9700 Jasper Avenue

Suite 540

Edmonton, AB T5J 4C3

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 Fax: (204) 983-2187

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International Trade Centre
 5, Place Ville-Marie
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 Fax: (514) 283-8794

New Brunswick:

Assumption Place
 770 Main Street
 P.O. Box 1210
 Moncton, NB E1C 8P9
 Tel.: (506) 857-6452
 Fax: (506) 851-6429

Prince Edward Island:

Confederation Court Mall
 134 Kent Street
 P.O. Box 1115
 Charlottetown, PE C1A 7M8
 Tel.: (902) 566-7400
 Fax: (902) 566-7450

Nova Scotia:

Central Guaranty Trust Tower
 1801 Hollis Street
 5th Floor
 P.O. Box 940, Stn M
 Halifax, NS B3J 2V9
 Tel.: (902) 426-7540
 Fax: (902) 426-2624

Newfoundland:

Atlantic Place
 215 Water Street
 Suite 504
 P.O. Box 8950
 St. John's NF A1B 3R9
 Tel.: (709) 772-5511
 Fax: (709) 772-5093/2373

**Program for Export Market
Development (PEMD)**

This program seeks to increase exports sales by sharing the costs of industry-initiated activities aimed at developing export markets. PEMD is administered by IC regional offices and funded by DFAIT. Activities eligible for PEMD financial support (up to 50 percent of the costs) include:

- participation in recognized foreign trade fairs outside of Canada;
- trips to identify export markets and visits by foreign buyers to Canada;
- project bidding or proposal preparation at the precontractual stage for projects outside Canada;
- the establishment of permanent sales offices abroad in order to undertake sustained marketing efforts;
- special activities for non-profit, non-sales food, agriculture and fish organizations, marketing boards and agencies, trade fairs, technical trials, and product demonstrations (for example); and
- new eligible costs include: product testing for market certification, legal fees for marketing agreements abroad, transportation costs for offshore company trainees, product demonstration costs and other costs necessary to execute the marketing plan.

Support is also provided for certain types of government-planned activities, such as organizing trade missions of Canadian business representatives and incoming missions to Canada of foreign business and government officials who can influence export sales. For information, call: (613) 954-2858.

International Financing

DFAIT helps Canadian exporters interested in pursuing multilateral business opportunities financed by international financing institutions (IFI). Canadian exporters and trade associations can access market data, obtain a better understanding of the competition, and determine if an IFI-funded market opportunity is practical and worth pursuing. DFAIT can provide information and advice on the availability of Canadian government-funded assistance programs and can assist companies in developing effective export marketing. For further information contact:

International Finance Division
Department of Foreign Affairs and International Trade
Tel.: (613) 995-7251
Fax: (613) 943-1100

Technology Inflow Program

Managed by DFAIT and delivered domestically by the National Research Council, this program is designed to help Canadian companies locate, acquire and adopt foreign technologies by promoting international collaboration. IC also helps in program promotion. The program officers respond to requests to identify technology sources and opportunities for cooperation between Canadian and foreign firms. The program will also help Canadian firms make exploratory visits abroad to identify and gain first-hand knowledge of relevant foreign technologies as well as to negotiate to acquire them.

For information, call: (613) 993-3996

World Information Network for Exports

The World Information Network for Exporters (WIN Exports) is a computer-based information

system designed to help Canada's trade development officers abroad match foreign needs to Canadian capabilities. It provides users with information on the capabilities, experience and interests of more than 30,000 Canadian exporters. To register on WIN Exports, call: (613) 996-5701.

Industry Canada

Industry Canada (IC) was created with a broad mandate to improve the competitiveness of Canadian industry. In the area of small business, it has been given specific responsibility to:

- develop, implement and promote national policies to foster the international competitiveness of Canadian industry; the enhancement of industrial, scientific and technological development; and the improvement in the productivity and efficiency of industry;
- promote the mobility of goods, services, and factors of production within Canada;
- develop and implement national policies to foster entrepreneurship and the start-up, growth and expansion of small businesses;
- develop and implement national policies and programs respecting industrial benefits from procurement of goods and services by the government of Canada; and
- promote and provide support services for the marketing of Canadian goods, services and technology.

Construction Industries and Capital Projects Industry Canada

235 Queen Street, 7th Floor, East Tower
Ottawa, ON K1A 0H5
Tel.: (613) 952-0218
Fax: (613) 941-8464

NAFTA Information Desk Industry Canada

235 Queen Street, 5th Floor, East Tower
Ottawa, ON K1A 0H5
Fax: (613) 952-0540

Canadian Government Departments and Services in Canada

IC Regional Offices

The regional offices work directly with Canadian companies to promote industrial, scientific and technological development. They help clients recognize opportunities in a competitive international marketplace by providing services in the areas of business intelligence and information, technology and industrial development, and trade and market development. They also promote and manage a portfolio of programs and services.

The following are areas in which IC regional offices have special competence:

- access to trade and technology intelligence and expertise;
- entry points to national and international networks;
- industry sector knowledge base;
- co-location with International Trade Centres connected to DFAIT and Canadian posts abroad;
- client focus on emerging and threshold firms; and
- IC Business Intelligence

Investment Development Program

This program helps Canadian companies find the investment they need. It actively promotes investments that take the form of new plant and equipment, joint ventures or strategic partnerships. It is especially interested in attracting investment that introduces new technology into Canada, a key to creating new jobs and economic opportunities. Investment officers make contact with foreign investors and bring them together with Canadian companies. For information, call: (613) 996-8625

Canadian International Development Agency

An important possible source of financing for Canadian ventures in Chile is the special fund available through the Canadian International

Development Agency (CIDA) under the Industrial Cooperation Program or CIDA/INC. CIDA's Industrial Cooperation Program provides financial contributions to stimulate Canadian private-sector involvement in developing countries by supporting long-term business relationships such as joint ventures and licensing arrangements. INC supports the development of linkages with the private sector in Chile encouraging Canadian enterprises to share their skills and experiences with partners in Chile, and other countries. A series of INC mechanisms help enterprises to establish mutually beneficial collaborative arrangements for the transfer of technology and the creation of employment in Chile.

There are five INC mechanisms which help eligible Canadian firms to conduct studies and provide professional guidance and advice to potential clients. Where a project involves environmental improvement, technology transfer, developmental assistance to women, job training, or job creation, early contact with CIDA's Industrial Cooperation Division is suggested. An important CIDA criterion is that the project creates jobs in the target country without threatening jobs in Canada. In fact, most CIDA-assisted projects have produced net increases in Canadian jobs.

Industrial Cooperation Division Canadian International Development Agency

200 Promenade du Portage
Hull, PQ K1A 0G4
Tel.: (819) 997-7905/7906
Fax: (819) 953-5204

The Business Opportunities Sourcing System (BOSS)

BOSS is a computerized databank that profiles over 26,000 Canadian companies. It lists basic information on products, services and operations that is useful to potential customers. The system was established in 1980 by IC in cooperation with participating provincial governments. BOSS was originally established so that Trade Commissioners posted around the world by DFAIT could find Canadian companies that might be able to take advantage of foreign market opportunities. Today,

more than 11,000 domestic and international subscribers use the system not only to locate Canadian suppliers but also to obtain market intelligence and identify market opportunities. The majority of subscribers are Canadian companies. For information call: (613) 954-5031.

Market Intelligence Service

This market service provides Canadian business with detailed market information on a product specific basis. The service assists Canadian companies in the exploitation of domestic, export, technology transfer, and new manufacturing investment opportunities. The intelligence is used by Canadian business in decisions regarding manufacturing, product development, marketing, and market expansion. The information includes values, volume and unit price imports, characteristics of specific imports (e.g. material, grade, price range, etc.), names of importers, major countries of export, identification of foreign exporters to Canada, Canadian production, Canadian exports, and U.S. imports. Two-thirds of the clientele for this service are small businesses. For information call: (613) 954-4970.

Revenue Canada

NAFTA Information Desk
Revenue Canada - Customs, Excise and Taxation
191 Laurier Avenue West
6th Floor
Ottawa, ON K1A 0L5
Tel.: 1-800-661-6121
Fax: (613) 954-4494

NAFTA Spanish Help Desk
Revenue Canada Customs provides a NAFTA Help Desk telephone line with service available in Spanish
Tel.: (613) 941-0965

Atlantic Canada Opportunities Agency

Atlantic Canadian companies seeking to develop exports to Chile may be eligible for assistance from the Atlantic Canada Opportunities Agency (ACOA).

The Agency works in partnerships with entrepreneurs from the Atlantic region to promote self-sustaining economic activity in Atlantic Canada.

The ACOA Action Program provides support to businesses as they look to expand existing markets through the development of Marketing Plans. Efforts include monitoring trade opportunities arising from global economic change; communications efforts to promote the region; trade missions and associated activities, as well as better coordination with federal and provincial bodies that influence trade and investment opportunities.

ACOA Head Office:

Blue Cross Centre
644 Main Street
P.O. Box 6051
Moncton, NB E1C 9J8
Toll free: 1-800-561-7862
Fax: (506) 851-7403

Newfoundland and Labrador:

Atlantic Place
215 Water Street, Suite 801
P.O. Box 1060, Station C
St. John's, NF A1C 5M5
Tel.: (709) 772-2712
Toll free: 1-800-563-5766
Fax: (709) 772-2712

Nova Scotia:

1801 Hollis Street
Suite 600
P.O. Box 2284, Station M
Halifax, NS B3J 3M5
Tel.: (902) 426-8361
Toll free: 1-800-565-0228
Fax: (902) 426-2054

Prince Edward Island:

75 Fitzroy Street
3rd Floor
Charlottetown, PE C1A 1R6
Tel.: (902) 566-7492
Toll free: 1-800-565-0228
Fax: (902) 566-7098

New Brunswick:

570 Queen Street
 P.O. Box 578
 Fredericton, N E3B 5A6
 Tel.: (506) 452-3184
 Toll free: 1-800-561-4030
 Fax: (506) 452-3285

**Western Economic Diversification
Canada**

Western Canadian companies interested in Chile may be able to secure assistance from Western Economic Diversification Canada (WD). This agency provides financial assistance for projects which contribute to the diversification of the western economy. It acts as a pathfinder to ensure that western businesses are aware of and receive assistance from the most appropriate source of funding, federal or other, for their projects. It acts as an advocate for the west in national economic decision-making and it coordinates federal activities that have an impact on economic growth in the west. It also plays a role in promoting trade between western Canada and markets around the world. Inquiries about the Western Diversification Program and other activities of the department can be directed to any of the following regional offices:

British Columbia:

Bentall Tower 4
 1200-1055 Dunsmuir Street
 P.O. Box 49276
 Vancouver, BC V7X 1L3
 Tel.: (604) 6666256
 Fax: (604) 666-2353
 Tollfree within the province
 Tel.: 1-800-663-2008

Alberta:

Canada Place
 9700 Jasper Avenue
 Suite 1500
 Edmonton, AB T5J 4H7
 Tel.: (403) 495-4164
 Fax: (403) 495-7725

Toll free within Calgary city limits
 Tel.: (403) 292-5382

Saskatchewan:

S.J. Cohen Building
 119-4th Avenue South
 Suite 601
 P.O. Box 2025
 Saskatoon, SK S7K 5X2
 Tel.: (306) 975-4373
 Fax: (306) 975-5484

Toll free within Regina city limits
 Tel.: (306) 780-6725

Manitoba:

The Cargill Building
 240 Graham Avenue
 Suite 712
 P.O. Box 777
 Winnipeg, MB R3C 2L4
 Tel.: (204) 983-4472
 Fax: (204) 983-4694

Export Development Corporation (EDC)

EDC is a unique financial institution that helps Canadian business compete internationally. EDC facilitates export trade and foreign investment by providing risk management services, including insurance and financing, to Canadian companies and their global customers.

EDC's programs fall into four major categories:

- export credit insurance, covering short and medium-sized credits;
- performance related guarantees and insurance, providing cover for exporters and financial institutions against calls on various performance bonds and obligations normally issued by banks or surety companies;
- foreign investment insurance, providing political risk protection for new Canadian investments abroad; and
- export financing, providing medium and long-term export financing to foreign buyers of Canadian goods and services.

For information on the full range of EDC services, contact any of the following EDC offices:

Ottawa (head Office):

151 O'Connor Street
Ottawa, ON K1A 1K3
Tel.: (613) 598-2500
Fax: (613) 237-2690

Public Information: Tel.: (613) 598-2739

Vancouver:

One Bentall Centre
505 Burrard Street
Suite 1030
Vancouver, BC V7X 1M5
Tel.: (604) 666-6234
Fax: (604) 666-7550

Calgary:

510-5th Street S.W.
Suite 1030
Calgary, AB T2P 3S2
Tel.: (403) 292-6898
Fax: (403) 292-6902

Winnipeg:

330 Portage Avenue
8th Floor
Winnipeg, MB R3C 0C4
Tel.: (204) 983-5114
Fax: (204) 983-2187
Serving Manitoba and Saskatchewan

Toronto:

National Bank Building
150 York Street
Suite 810
P.O. Box 810
Toronto, ON M5H 3S5
Tel.: (416) 973-6211
Fax: (416) 862-1267

London:

Talbot Centre
148 Fullarton Street
Suite 1512
London, ON N6A 5P3
Tel.: (519) 645-5828
Fax.: (519) 645-5580

Montreal:

Tour de la Bourse
800 Victoria Square
Suite 4520
P.O. Box 124
Montreal, PQ H4Z 1C3
Tel.: (514) 283-3013
Fax: (514) 878-9891

Halifax:

Purdy's Wharf, Tower 2
1969 Upper Water Street
Suite 1410
Halifax, NS B3J 3R7
Tel.: (902) 429-0426
Fax: (902) 423-0881

National Research Council

Canadian companies hoping to succeed in the Chilean marketplace may require additional technology to improve their competitiveness. The National Research Council (NRC) works with Canadian firms of all sizes to develop and apply technology for economic benefit. The Council supervises the Industrial Research Assistance Program (IRAP), a national network for the diffusion and transfer of technology.

The IRAP network supports the process of developing, accessing, acquiring, implanting, and using technology throughout Canadian industry. IRAP has been in existence for 40 years and has acquired a reputation as one of the more flexible and effective federal programs. IRAP takes advantage of an extensive network that includes more than 120 regional and local offices, 20 provincial technology centres, the Council's own laboratories and research institutes, federal government departments, and technology transfer offices in Canadian universities. The IRAP network also extends abroad through the technology counsellors attached to Canadian posts in some 18 foreign countries. For more information or the name of the IRAP officer nearest you, contact the following:

**IRAP Office
National Research Council**

Montreal Road
Building M-55
Ottawa, ON K1A 0R6
Tel.: (613) 993-5326
Fax: (613) 952-1086

6.2 BUSINESS AND PROFESSIONAL ASSOCIATIONS IN CANADA

The Canadian Council for the Americas (CCA) is a non-profit organization formed in 1987 to promote business interests in Latin American and Caribbean countries. The CCA promotes events and programs targeted at expanding business and building networking contacts between Canada and the countries of the region. It also publishes a bimonthly newsletter.

The Canadian Council for the Americas (CCA)
Executive Offices
360 Bay Street, Suite 300
Toronto, ON M5H 2L2
Tel.: (416) 367-4313
Fax: (416) 367-5460

Canadian Exporters' Association (CEA)
99 Bank Street, Suite 250
Ottawa, ON K1P 6B9
Tel.: (613) 238-8888
Fax: (613) 563-9218

Canadian Manufacturers' Association (CMA)
75 International Boulevard, 4th Floor
Etobicoke, ON M9W 6L9
Tel.: (416) 798-8000
Fax: (416) 798-8050

The Canadian Chamber of Commerce (CCC)
55 Metcalfe Street, Suite 1160
Ottawa, ON K1P 6N4
Tel.: (613) 238-4000
Fax: (613) 238-7643

Forum for International Trade and Training (FITT)
155 Queen Street, Suite 608
Ottawa, ON K1P 6L1
Tel.: (613) 230-3553
Fax: (613) 230-6808

Language Information Centre*
240 Sparks Street, RPO
Box 55011
Ottawa, ON K1P 1A1
Tel.: (613) 523-3510

Canadian Freight Forwarders Association (CFFA)
Box 929
Streetsville, ON L5M 2C5
Tel.: (905) 567-4633
Fax: (905) 542-2716

Canadian Standards Association (CSA)
178 Rexdale Blvd.
Rexdale, ON M9W 1R3
Tel.: (416) 747-4000
Fax: (416) 747-4149

Standards Council of Canada (SCC)
45 O'Connor Street, Suite 1200
Ottawa, ON K1P 6N7
Tel.: (613) 238-3222
Fax: (613) 995-4564

Association of Consulting Engineers of Canada (ACEC)
130 Albert Street, Suite 616
Ottawa, ON K1P 5G4
Tel.: (613) 236-0569
Fax: (613) 236-6193

Canadian Association of Mining Equipment and Services for Export (CAMESE)
Suite 903, 505 Consumers Road
Willowdale, Ontario
M2J 4V8
Tel: (416) 498 0382
Fax: (416) 492 8711

Machinery and Equipment Manufacturers' Association of Canada (MEMAC)
Suite 701, 116 Albert Street
Ottawa, ON K1P 5G3
Tel: (613) 232 7213
Fax: (613) 232 7381

6.3 CHILEAN GOVERNMENT OFFICES IN CANADA

The Embassy of Chile, and Chilean consulates can provide assistance and guidance to Canadian companies in need of information about doing business in Chile.

Commercial Division

Embassy of Chile

Suite 605
151 Slater Street
Ottawa, Ontario
K1P 5H3

Tel: (613) 235 4402 or 235 9940
Fax: (613) 235 1176
Telex: 3774 (EMBACHILE OT)

General Consulate of Chile - Montreal

1010 Sherbrooke Street West
Suite 710
Montreal, Quebec
H3A 2R7

Tel: (514) 499 0405
Fax: (514) 499 8914
Telex: 05562423 (CONGECHILE MTL)

General Consulate of Chile - Toronto

Suite 800
170 Bloor Street West
Toronto, Ontario
M5S 1T9

Tel: (416) 924 0106 / 924 0112
Fax: (416) 924 2727

Prochile

Trade Commission of Chile
Suite 801
170 Bloor Street West
Toronto, Ontario
M5S 1T9

Tel: (416) 924 0176
Fax: (416) 924 2627

General Consulate of Chile - Vancouver

1250 - 1185 West Georgia
Vancouver, B.C.
V6E 4E6

Tel: (604) 681 9162
Fax: (604) 682 2445

6.4 CANADIAN GOVERNMENT DEPARTMENTS AND SERVICES IN CHILE

Note: to telephone Santiago, dial: 011-56-2 before the number shown; for contacts in other cities in Chile, consult the international code listing at the front of your local telephone directory for the appropriate regional codes.

Commercial Division

The Embassy of Canada in Chile

Ahumada 11, 10th Floor (Street Address)
Casilla 771 (Mailing Address)
Santiago, Chile
Tel: 696 2256
Fax: 696 0738
Telex: (Destination code 34) 240 341 (DMCAN
CL)

The Commercial Division of the Canadian Embassy in Chile can provide vital assistance to Canadians venturing into the Chilean market. The trade commissioners are well informed about the market and will respond in whatever measure possible to support a Canadian firm's presence in Chile.

Chilean-Canadian Chamber of Commerce

El Retiro 4892
Vitacura, Santiago
Tel.: 219 2551
Fax: 219-2551

6.5 PRINCIPALES TELECOMMUNICATIONS COMPANIES IN CHILE

Compañía de Telecomunicaciones de Chile (CTC)

Raymundo Beca, Vice-Président Planification
Pedro Gutiérrez Sanchez, Gérant de Planification et Etude
Apoquindo 4499, Piso 16
Casilla 16-D
Santiago de Chile
Tel: (562) 206-7089, 691-2485
Fax: (562) 206-6484

Isaud Flores, Vice-Président du Réseau
Isabel Margarita Bravo, Directrice Etudes
Agustinas 640, Piso 25
Casilla 16-D
Santiago de Chile
Tel: (562) 632-3474
Fax: (562) 632-3700

CTC Mundo

Alejandro St-Jean, Directeur Général
Nueva de Lyon 72,
Casilla 16370, Piso 9
Providencia, Santiago de Chile
Tel: (562) 234-5050
Fax: (562) 330-9630

ENTEL

Richard Büchi, Directeur Général
Konrad Burchardt, Vice-Président Commercial
Jorge Fritis Castro, Directeur de Planification Corporative
Felipe Wilson, Directeur des Produits Multicarrier
Avenida Andres Bello 2687, Piso 14
Santiago de Chile
Tel: (562) 690-2190
Fax: (562) 690-2812

VTR S.A.

Felipe Lehuedé, Directeur Général
Lorena Oliva, Directrice Planification
Bandera 168
Santiago de Chile
Tel: (562) 699-6267, 694-6230
Fax: (562) 698-4127

TELEX-CHILE

Antonio Bulnes, Directeur Général, Chilesat
Ramon Valdivieso, Directeur Général, TelexChile
Mirconada del Salto 202 (Palacio Riesco)
Huechuraba, Santiago de Chile
Tel: (562) 252-5171

BellSouth Chile

Jorge Bascur, Directeur Général
El Bosque Norte 134, Piso 13
Santiago de Chile
Tel: (562) 339-5350

Iusatel

Gaston Pereira, Directeur Général
Pedro de Valdivia 100, Piso 15
Santiago de Chile
Tel: (562) 246-9155

CIDCOM Celular (BellSouth)

Jorge Merino, Directeur Opérations
Tel: (562) 339-5000
Fax: (562) 231-0915

CMET

Julio Yubero Canepa, Directeur des Opérations
Av. Los Leones 1412
Casilla 16579, Correo 9
Santiago de Chile
Tel: (562) 251-3333
Fax: (562) 274-9573

Telefonica Manquehue S.A.

Av. Santa Maria 6924
Santiago de Chile
Tel: (562) 243-8800
Fax: (562) 242-7292

Hewster S.A.

Rafael Cañas 223
Santiago de Chile
Tel: (562) 236-1421

6.6 PRINCIPAL AGENTS

Suppliers of Satellite Services

Tel: (562) 696-9102

Alphacomm Ltda.

Apoquindo 6415, of.97
Santiago de Chile
Tel: (562) 201-7407, 229-7735

Alcatel Standard Electric S.A.

Av. 11 de Septiembre 2350
Santiago de Chile
Tel: (562) 230-3000

KuhnLtda.

Marin 97
Santiago de Chile
Tel: (562) 222-7260
Fax: (562) 634-4631

Scharfstein S.A.

Jose Scharfstein, Président
Av. Santa Maria 510
Santiago de Chile
Tel: (562) 737-2020

Helios Telecomunicaciones

Joaquin Falabella Garcia, Président
Av. Jorge Alessandri 515
Santiago de Chile
Tel: (562) 273-1849, 273-3480
Fax: (562) 273-1956

Bitelco Telecomunicaciones

Alberto Fuentes Fernandez, Directeur Général
Av. Manuel Montt 1538
Santiago de Chile
Tel: (562) 209-1221
Fax: (562) 225-1074

Lenkurt Telecomunicaciones Ltda.

Estado 10, of.301
Santiago de Chile
Tel: (562) 696-2210
Fax: (562) 696 -0150

Nicom S.A.

Vicente Gonzalez Vasquez, Directeur Général
Av. Suecia 1821
Santiago de Chile
Tel: (562) 209-9436

Rimpex Chile S.A.

Jaime Valenzuela Carvallo, Directeur Général
Av. Pedro de Valdivia 1667
Santiago de Chile
Tel: (562) 223-5721
Fax: (562) 223-1129

Hess May S.A.

Teatinos 425
Santiago de Chile
Tel: (562) 696-8010

Multiline and PABX Equipment Operators

Importadora P&D

Promtel Ltda.

Huerfanos 1117, of.1020
Santiago de Chile

Teatinos 602
Santiago de Chile
Tel: (562) 671-8531

Ingelsac

Gerd Borgstedt Hausser, Directeur Général
Av. Holanda 64
Santiago de Chile
Tel: (562) 231-0000

Philips Chilena S.A.

Anton Molenaar, Président Exécutif
Av. Santa Maria 760
Santiago de Chile
Tel: (562) 777-0038
Fax: (562) 735-3594

Switch S.A.

Av. Manquehue Sur 944
Las Condes, Santiago de Chile
Tel: (562) 201-8811
Fax: (562) 212-3228

Teknos Comunicaciones S.A.

Patricio Torm Bonet, Directeur Général
Santa Elena 2222
Santiago de Chile
Tel: (562) 556-8390
Fax: (562) 551-9571

Beeper Suppliers

Scharfstein S.A.

(see previous section))

Beep-pers

Av. Presidente Bulnes 351, Of. 808
Santiago de Chile
Tel: (562) 695-5458
Fax: (562) 671-3576

Comunicaciones Bermann

Raul Bermann Gold, Directeur Général
San Francisco 363
Santiago de Chile
Tel: (562) 632-7550

Gallays Telecomunicaciones S.A.

Fernando Gallyas, Directeur Général
Av. Salvador 1318
Providencia, Santiago de Chile
Tel: (562) 225-9001
Fax: (562) 225-9781

Instacom S.A.

Gerardo Marti, Directeur Général
Av. Santa Elena 2222
Santiago de Chile
Tel: (562) 550-2795
Fax: (562) 550-2790

Nicoletti Comunicacion

Arturo Nicoletti franceschini, Directeur Général
Lira 81, of. 6
Santiago de Chile
Tel: (562) 639-2046
Fax: (562) 632-2677

Radio Shack

Av. Kennedy Parque Arauco 5413, of. 107
Santiago de Chile
Tel: (562) 242-0156
Fax: (562) 242-0157

Scamusica

Piero Molfino bürkert
Napoleon 3140
Santiago de Chile Tel: (562) 231-2691

Cellular Operators:

Autobahn S.A.

Enrique Pirard, Directeur Général
Av. Los Leones 2208
Santiago de Chile
Tel: (562) 225-5080
Fax: (562) 274-6283

Boutique Celular

Marin 39
Santiago de Chile
Tel: (562) 635-4855

Celcenter

Asturia 271, Piso 6
Santiago de Chile
Tel: (562) 206-5646

Cidcom Celular

(voir section précédente)

Ericsson de Chile S.A.

Av. Gertrudis Echeñique 30, Piso 22
santiago de Chile
Tel: (562) 208-0066
Fax: (562) 206-6286

Gallays Telecomunicaciones S.A.

(voir section précédente)

NEC Chile S.A.

Yasuhisa Teramoto, Directeur Général
San Crescente 81, Piso 2
Santiago de Chile
Tel: (562) 233-6767
Fax: (562) 233-5243

Ovalle, Reynolds Y Cia. Ltda.

Av. Mariano Sanchez Fontecilla 538
Santiago de Chile
Tel: (562) 246-1011
Fax: (562) 246-1012

Philips Chilena S.A.

(voir section précédente)

Video S.A.

Av. Las Condes 9120
Santiago de Chile
Tel: (562) 201-1943

Incotel Ltda.

Av. Antonio Varas 721
Providencia, santiago de Chile
Tel: (562) 235-5016

Interexport Ltda.

Raul Rojas Baltra, Président
Av. Fransisco Bilbao 2168
Santiago de Chile
Tel: (562) 635-2885
Fax: (562) 204-4655

Cable Service Operators:**T.V. Max**

Galvarino Gallardo 1535
Santiago de Chile
Tel: (562) 246-8199
Fax: (562) 246-8133

TV Cable Intercom

Av. Santa Maria 5542
Santiago de Chile
Tel: (562) 208-1331
Fax: (562) 228-4514

Metropolis S.A.

Av. Presidente Battle y Ordoñez 4851
Santiago de Chile
Tel: (562) 277-7399
Fax: (562) 226-5342

Cablexpress

Salesianos 1140
Santiago de Chile
Tel: (562) 554-4500
Fax: (562) 551-9050

6.7 Service Suppliers

Server Ingeneria

Monjitas 843-A, of.33
Santiago de Chile
Tel: (562) 632-1296

Coasin Chile Ltda. (représentant de Newbridge Networks Corp.)

Raul Ciudad de la Cruz, Président
Holanda 1310, Providencia
Santiago de Chile
Tel: (562) 225-0643
Fax: (562) 274-4588

Interexport Ltda. (voir section précédente)

Raylex S.A.

Carlos Dubournais, Directeur Général
Av. Fransisco Bilbao 2469
Santiago de Chile
Tel: (562) 274-0088
Fax: (562) 225-3520

Telesistemas S.A.

La Concepcion 81, Piso 16
Santiago de Chile
Tel: (562) 246-6511

Gallays Telecomunicaciones S.A. (voir section précédente)

Com Center

Av. Apoquindo 2965
Santiago de Chile
Tel: (562) 251-7201

I-Systemas Ltda.

Conrad Ariztia O'Brian, Directeur Général
Colo Colo 816
Casilla 463 Correo 11
Santiago de Chile
Tel: (562) 209-0798
Fax: (562) 209-9400

6.8 Other Key Agents

Sonda Ltda.

Jorge Diaz, Directeur Commercial
Teatinos 574
Santiago de Chile
Tel: (562) 695-2277
Fax: (5620) 695-8335

Inpact S.A.

Paul andawater, Directeur
Av. Antonio Varas 697
Santiago de Chile
Tel: (562) 235-9933
Fax: (562) 233-7428

Telectronic Ltda.

(représentant de Northern Telecom)

George Cargill, Directeur Général
Eidoro Yañez 2238
Casilla 16476
Santiago de Chile
Tel: (562) 225-7171
Fax: (562) 341-4037

Alarmatic

Juan Bernard Mayer, Directeur Général
Los Leones 2194
Santiago de Chile
Tel: (562) 225-8006
Fax: (562) 204-9405

Asicom S.A.

Patricio Bernstein, Directeur Général
Mar de la Plata 2147
Santiago de Chile
Tel: (562) 204-7100
Fax: (562) 204-7516

6.9 Institutions interested in the Telecommunications Industry

Subtel (Subsecretaria de Telecomunicaciones)

Gregorio San Martin, Directeur Général
Amunátegui 139
Casilla 99, Correo 21
Santiago de Chile
Tel: (562) 672-6503
Fax: (562) 699-5138

Consejo Nacional de Television

Pilar Armanet, Présidente du Conseil
Moneda 1020, Piso 4
Santiago de Chile
Tel: (562) 698-2306

Asociacion Nacional de Importadores A.G.

Santa Lucia 302, Piso 5
Casilla 1015, Correo Central
Santiago de Chile
Tel/Fax: (562) 639-7859

Camara de Comercio de Santiago A.G.

Santa Lucia 302, Pisos 1, 2 et 3
Casilla 1297, Correo Central
Santiago de Chile
Tel/Fax: (562) 632-1232

Asociacion Chilena de Telefonía Celular

Sergio Cavagnaro, Président
Fidel Oteiza 1953
Santiago de Chile
Tel: (562) 204-5355
Fax: (562) 204-7287

Asociacion Nacional Chilena de Empresas de Informatica A.G.- ACHEI

Oswaldo Schaerer, Président
Av. Santa Maria 508, Providencia
Santiago de Chile
Tel: (562) 777-9530
Fax: (562) 777-8681

Corporacion Privada de Empresas e Instituciones Usuarias de la Informatica y las Telecomunicaciones- ASEUCI

Rodolfo Retamales, Président
Triana 849
Santiago de Chile
Tel: (562) 274-8573
Fax: (562) 274-0105

Federacion Latinoamericana de Usuarios de la Informatica y las Telecomunicaciones-FLAI

Leandro Sanhueza, Président
Ahumada 312, Of. 515
Santiago de Chile
Tel/Fax: (562) 696-8664

Centro Nacional de Electronica y Telecomunicaciones- CENET

Johny Wolf, Directeur
Universidad de Chile
Arturo Prat 1171
Santiago de Chile
Tel: (562) 556-1048

6.10 Publications

Electricidad y Telecomunicaciones

Matilde Salamanca 736, Piso 6
Santiago de Chile
Tel: (562) 209-8100
Fax: (562) 209-8101

Telecomunicaciones

Principe de Gales 87
Santiago de Chile
Tel/Fax: (562) 672-4928, 695-2786

Chiletel

Virginia Opazo 26
Santiago de Chile
Tel: (562) 696-3543
Fax: (562) 697-0398

Microbyte

Passy 56, Providencia
Santiago de Chile
Tel/Fax: (562) 222-2699

El Diario

Av. Suecia 659
Casilla 16735, Correo 9, Providencia
Santiago de Chile
Tel: (562) 246-9000
Fax: (562) 251-9907

La Epoca

Serrano 240
Santiago de Chile
Tel: (562) 638-4444
Fax: (562) 638-1105

Estrategia

Rafael Cañas 114
Casilla 16485, Correo 9
Santiago de Chile
Tel: (562) 236-1313, 235-9331
Fax: (562) 236-1114

El Mercurio

Av. Santa Maria 5542, Las Condes
Casilla 13-D, Correo Central
Santiago de Chile
Tel: (562) 330-1111
Fax: (562) 228-9042, 228-7541

America Economia

Galvaria Gallardo 1670
Casilla 113, Correo 33
Santiago de Chile
Tel: (562) 235-8090
Fax: (562) 235-2498

Economia y Administracion

Diagonal Paraguay 257, Piso 2, of. 2204
Casilla 9727, Correo Central
Santiago de Chile
Tel: (562) 222-8521
Fax: (562) 222-0309

News Review

Casilla 151/19
Santiago de Chile
Tel: (562) 236-1423
Fax: (562) 235-9891

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